

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 841.—Vol. XXI.]

LONDON, SATURDAY, OCTOBER 4, 1851.

[PRICE 6D.]

### Stannaries of Cornwall.—In the Vice-Warden's Court.

**PURSUANT to a DECREE of the VICE-WARDEN'S COURT**, made in the case of **TACKLE and OTHERS v. MILL, the CREDITORS** in respect of **WHEEL POLGAR and LANCARROW MINE**, in the parish of **WENDRON**, within the said Stannaries, are, on or before the 14th day of October instant, to come in and **PROVE** their **DEBTS** before the Registrar of the said Court, at his office in **Truro**; or, in default thereof, they will be peremptorily excluded the benefit of the said Decree.—Dated Registrar's Office, Truro, October 1, 1851.

**PURSUANT to a DECREE of the HIGH COURT of CHANCERY**, made in a cause of **BIRCH v. PRICE**, with the approbation of Sir William Horne, one of the Masters of the said court, peremptorily, by Mr. JOHNSON, on Friday, the 24th day of October next, at Three o'clock in the afternoon, at the Wyndham Arms Hotel, in WREXHAM, in the county of DENBIGH, in one lot, the **FREEHOLD ESTATE**, consisting of **PLAS MOSTYN FARM, COLLIERIES, and MINERALS of COAL and IRONSTONE**, situate in the said parish of Wrexham.

Particulars may be had gratis, in London, at the said Master's Chambers, Southampton-buildings, Chancery-lane; Mr. N. C. Mills, solicitor, Harcourt-buildings, Temple; of Messrs. Hughes, Fairford, and Webb, solicitors, Clement's Inn; and in the country, of Mr. Jones, solicitor, Brynhyfryd, Ruthin; and Mr. Robert Humphreys Jones, solicitor, Wrexham; at the place of sale; and the principal lane in Ruabon, Liverpool, Manchester, Chester, Shrewsbury, Wolverhampton, and Birmingham.

Valuable **FREEHOLD ESTATES, FARMS, and COLLIERIES**, in the parishes of **RUABON and EBISTOCK, DENBIGHSHIRE, and CONTIGUOUS FARMS**, in the parishes of **ELLESMERE and ST. MARTIN, SHROPSHIRE**.

**MR. JOHNSON will SELL, BY AUCTION**, at the Wyndham Arms Hotel, WREXHAM, on Thursday, the 23d day of October, 1851 (unless previously disposed of by private contract, of which due notice will be given), precisely at Three o'clock in the afternoon, all that valuable **ESTATE**, called

### PENYLAN.

situate in the parishes of **RUABON and EBISTOCK**, in the county of **DENBIGH**, and **ELLESMERE and ST. MARTIN**, in the county of **SALOP**, containing upwards of 1900 acres of land, divided into compact farms, and let to respectable tenants, at rentals realising nearly £2000 per annum.

And also several very valuable **COLLIERIES and MINES of COAL and IRONSTONE**, now in full operation, and producing large royalties.

Also, the **TITHES** and **CHARGES**, payable out of the several townships of **Crieston, yd Kenrick, Dinlithia-lea, and Dinlithia-uch, in the said parish of Ruabon**, which produce an annual rental of £307.

**PART of the ESTATE**, comprising the **MANSION**, delightfully situated, on the banks of the River Dee, celebrated for its salmon and trout fishing, within three miles of Ruabon Railway Station, and commanding the most beautiful views, and is suitable for the residence of a family of the first respectability, with the park, extensive woods and covers, abounding with game, together with several farms adjoining, and containing, in a ring fence, about 1100 acres will be OFFERED FOR SALE in ONE LOT. The remainder of the **FARMS, COLLIERIES, and TITHES**, will be OFFERED FOR SALE in SEVERAL LOTS.

The Estate is in the midst of a sporting country, and is immediately adjoining the lands and park of Sir W. W. Wynne, Bart., whose kennels are contiguous, and presents an opportunity for the investment of capital rarely to be met with.

Maps and particulars may be had of Daniel Smith Beckett, Esq., solicitor, 60, Lincoln's Inn-fields, London; of Messrs. Duncan, Square, and Duncan, solicitors, Exchange-buildings, Liverpool; of Wm. Wood, Esq., solicitor, 18, Cooper-street, Manchester; at the principal towns in Manchester, Liverpool, Chester, Ruabon, Shrewsbury, and Birmingham; or of the auctioneer, in Wrexham; and of Mr. H. Jones, solicitor, Wrexham.

**GLAMORGANSHIRE.—SALE of Valuable FREEHOLD ESTATES and MINERALS**

**MR. THOMAS THOMAS will SELL, BY AUCTION**, at the Castle Hotel, NEATH, on Wednesday, the 29th of October, 1851, between the hours of Twelve at noon and Two o'clock in the afternoon, unless previously disposed of by private contract (of which due notice will be given), in such lots and subject to such conditions of sale as will then be produced, the following valuable and improvable

### FREEHOLD ESTATES.—viz.

The **FARMS of MAESMELIN and PANT-Y-SHANEL**, with the **COTTAGES** thereon and **WOODLAND** adjoining, containing altogether about 131a.

**PENTWYN**, containing about 47a. to 29a.

A **MOIETY of the FARM of NOYADD WEN**, and the **WOODLAND** adjoining, containing altogether about 65 acres, all of which are in the parish of Cadoxton-juxta-Neath; and all **MINES and MINERALS** under a part, containing upwards of 200 acres, of the **GLAMORGANSHIRE ESTATE**, situate in the parish of Llanmael.

Particulars and plans are in preparation, and will shortly be ready for delivery. Further particulars may be obtained of Messrs. Llewellyn and Randall, solicitors, Neath; or of the auctioneer, West of England Insurance Office, Neath, who will, on being applied to, give every facility for viewing the property.

**MINING PROPERTY**, situated in the parish of **LLANDLOES**, in the county of **MONTGOMERY, NORTH WALES**.

**TO BE SOLD, BY TENDER, the MONTGOMERY (formerly Nantmelyn) LEAD and COPPER MINE**, together with the splendid **NEW and RECENTLY ERECTED MACHINERY**—comprising

1 46-ft. wheel  
2 balance hoists  
1 main ditto  
200 fms. flat iron rods  
1 20-ft. wheel and crushing mill  
10 fms. 9-inch pumps  
10 fms. 8-inch ditto  
1 working barrel  
1 capstan and shears  
and a large quantity of materials, smiths' tools, &c. &c.

Application to view the mine, &c., to be made to Capt. Michael Barbary, Plympton, Glamorgan, South Wales.

Tenders for the above receivable until the 15th proximo, to be addressed to me, at 31, New Church-street, Bermondsey, London. J. N. EDWARDS, Secretary.

September 26, 1851.

**TO BE SOLD, BY PRIVATE CONTRACT**, the whole of the **FIRE-CLAY WORKS**, situated at **OLD CASSOP**, near **DURHAM**, comprising **STEAM-ENGINE**, of 14-horse power, **STONES, PUG-MILL**, all complete; **PRESSING MACHINE** for large pipes, and **DRAIN-TILE MACHINE**; 4 kilns, and 4 large drying flues, 40 feet by 22 feet; branch railway and drift rails; all the moulds for chimneys, &c., necessary for carrying out an extensive business, together with office and workman's house.—These works are held under the Bishop of Durham by lease, for 21 years, from May, 1847, and are conveyed by Messrs. Llewellyn and Randall, solicitors, Neath; and the auctioneer, West of England Insurance Office, Neath, who will, on being applied to, give every facility for viewing the property.

Application to be made to the Old Cassop Fire-Clay Company, Ferry-hill.

**TO MINE PROPRIETORS.—TO BE SOLD, at TOMAN-TOUL, BANFERSHIRE**, a very superior **CRUSHING MILL**; the water-wheel is entirely of cast-iron, 24-feet diameter, 4-feet breast, and overshoot. The spur wheel is 12-feet diameter, and with the axles, pinions, &c., very strong, and capable of driving any additional machinery the water-wheel can propel. The crushing cylinders are 24 feet long, the upper pair 2 feet diameter, and the lower 20 inches. The framing is strong, and the best rock cut. Compound levers are attached to each pair of cylinders, affording any power that may be required at will. The machinery is of the best quality as to materials, strength, and workmanship, and, being under cover, is as good as when put up, having never required any repairs. The machinery may be shipped at Kingston-upon-Thames, or Port Gordon, on the Moray Frith, to which there are good roads. Applications for purchase may be made to James Burgess, mining engineer, 49, Cornhill-row, Newcastle-on-Tyne.

**WALL'S-END COLLIERY.—TO BE LET**, and entered upon on or after the 28th day of September next, for such a term of years as may be agreed upon, all that **CURRENT-GOING COLLIERY**, well-known by the name of **WALL'S-END COLLIERY**, at present held by Messrs. Archbold and partners, under lease from the Dean and Chapter of Durham, comprising the **COAL MINES** under the whole of the lands belonging to the said Dean and Chapter, in the township of **WALL'S-END**, in the county of **NORTHUMBERLAND**.

The Low Main Seam, which has been sunk to a depth of 22 fathoms below the Beaumont Seam, and the Beaumont Seam, which has been bored to a further depth of 23 fathoms, remain untouched throughout the Royalty. The Low Main Seam, in the royalty itself, is of good quality, and is worked for gas purposes.

The Beaumont Seam supplies the vend of the existing colliery. The colliery is contiguous to, and has shipping berths on, the River Tyne.

Plans of the workings of the colliery, and further particulars, may be known on application to Mr. E. F. Boyd, Uppish Colliery, near Chester-le-street; or at the office of the Registrar of the Dean and Chapter of Durham, 28, South Bailey, Durham.

Durham, July 2, 1851.

**TO AGRICULTURISTS.—IMPROVEMENTS IN THE PREPARATION of MANURES.—AGRICULTURISTS are INVITED to take**

**SALES of MANURES** (Stones' Patent Huminate), free of expense, at the office of the **GRANITE, PEAT-WORKING and MANURE COMPANY**, 6, JOHN-STREET, LONDON.—The Patent Huminate is free from filthy matter; it consists entirely of concentrated decomposed vegetable organic substances, soluble humic acid, fixed salts of ammonia, with other ingredients, according with soil, plant, and climate. It will promote vegetation in all its requirements, and invariably improve the soil, and can challenge the best guano, at one-third the cost.

To every scientific person, or practical farmer (however deficient in knowledge of chemical science), who inquires into the composition of these manures, the folly of bringing manure to England, even though they cost but one quarter the price now paid for the same, will appear manifestly.

Applications may be had on application at the Mining Journal office, 26, Fleet-street.

**MR. JAMES CROFTS, of 4, KING-STREET, CHEAPSIDE**, MINING BROKER, OFFERS his best SERVICES to CAPITALISTS for the PURCHASE or SALE of MINING SHARES, and transacts business only for principals.

Mr. Crofts has FOR SALE SHARES in the following MINES:—Wheal Zion, Ohel Tor, South Tamar, East Tamar, Bodmin Consols, Wreneggan, Wheal Lorn, North Fowey Consols, Calstock Consols, Wheal Samson, Devon Burra Burra, East Boringdon, Wheal Williams, Holmbush, All-y-Crib, Wheal Tremar, Wheal Tom, &c., and can PROCURE or SELL SHARES in all DIVIDEND MINES, and in particular a permanent one, paying £8 per share upon a cost of £35 per share, or nearly 25 per cent. per annum interest.

The increased business in mining shares is producing more regularity in prices, and rendering transactions of a more easy and satisfactory character. Mr. Crofts will (confidentially) give an opinion of the value of any mine within his knowledge, either personally or by letter.—Dated Oct. 4, 1851.

### GENERAL MINING OFFICES, 23, Threadneedle-street, London.

**MR. JOSEPH JAMES REYNOLDS, late of CAMBORNE**, CORNWALL, begs to inform his friends and the public that he has COMMENCED BUSINESS as a MINING and GENERAL AGENT at the above office, and trusts, by paying a due regard to the welfare of his clients, that he will at all times merit their confidence. Having been connected with the management of mines in the most productive districts of Cornwall upwards of twenty years, and being in communication with some of the most respectable agents in the mining districts, Mr. Reynolds will be enabled at all times to furnish such information as may be relied on.

Mr. Reynolds has SHARES in the following MINES FOR SALE:—

|                       |                     |                          |
|-----------------------|---------------------|--------------------------|
| Carvannall            | East Pool           | West Wheal Seton         |
| West Bassett          | Cook's Kitchen      | Wheal Seton              |
| West Stray Park       | East Wheal Frances  | Millpool                 |
| Pandarras & St. Aubyn | Great Wheal Badden  | Daren                    |
| South Condurrow       | West Wheal Virgin   | Great Wheal Sheba        |
| Wheal Unity           | Wheal Lorn          | North Tolgus             |
| Wheal Gill            | North Fowey Consols | Cefn Gwyn                |
| Sydney Godolphin      | Wheal Susan         | Molland                  |
| Rocks and Treverbyn   | Merilyn Wh Enys     | Black Craig and Craigton |

Many of the mines referred to in the above list are well worthy the attention of capitalists.

And is a BUYER in the following MINES:—Sparrow Consols, Treleigh Consols, and Wheal Zion.

J. J. REYNOLDS will carry on business upon COMMISSION ONLY, making no intermediate price between buyers and sellers, and will be ready at all times to introduce the buyer and seller of any shares to each other.—Office hours Ten to Four.

**MESSRS. FRANCIS & CO.** in order to avoid the complicated and indefinite system of CALLS for working or proving mines, consider that a better and more satisfactory one will be found in offering the public those chiefly in which the machinery and underground work required to bring them into a state of profit has been completed and paid for.

In mines thus far advanced, it will be obvious that as there will be no risk, so there can be no necessity for calls—the speculative part of the adventure having been gone through; and in this way capitalists will be enabled to invest with the certainty of immediate returns.

Mr. MATTHEW FRANCIS takes leave to announce, that he has several THOUSANDS of POUNDS WORTH of SHARES to DISPOSE OF, which, at the selling price, give a profit of from £20 to £40 per cent.

\* \* \* Offices, No. 7, John-street, Adelphi, London.

**MESSRS. FRANCIS & LIGHTOLLER, MINING AGENTS and CIVIL ENGINEERS.**

OFFICE.—No. 34, EXCHANGE ARCADE, MANCHESTER.

Messrs. FRANCIS and LIGHTOLLER, may be CONSULTED by MINING COMPANIES or OTHER PARTIES requiring INSPECTIONS and REPORTS on MINES of every description, or by CAPITALISTS and OTHERS desirous of INVESTING their CAPITAL in MINES or other MINERAL PROPERTIES. Statistics and other general information connected with Mines and the Mineral Districts given or obtained with the utmost dispatch.

Capt. Abasalom Francis having had upwards of 30 years' experience in the practical management of mines, and reported on most of the principal ones in the United Kingdom, applicants may rest assured they will receive full and satisfactory information on matters connected with mining.

Arbitrators, and contractors for the erection of engines and every description of mining machinery.

**MINING INVESTMENT.—T. FULLER and CO., No. 51, THREADNEEDLE-STREET, LONDON**, beg respectfully to inform the public that they are in a position to BUY and SELL in all the DIVIDEND-PAYING MINES, which upon present purchase will pay from 15 to 25 per cent., and have on hand Bedford United, Devon Great Consols, Mary Ann, Trelawny, West Caradon, Great Wheal Friendship and Venton, Boringdon Park, Wheal Catherine, Franco, Zion. Also shares in Wheal Williams—this is a continuation of the Devon Great Consols, and embracing several of the same lodes; also Devon Consols North—this adjoins the latter, which, with £1 paid, are marketable at £300, and paying £48 per annum in dividends.—Every information given, either personally or by letter.—Office hours from Ten to Four.

**MINING OFFICES, REDRUTH.—JOHN ROBERT PIKE**, GENERAL SHAREBROKER (on Commission only), being resident in the centre of the Mining district, POSSESSES great FACILITIES in the DISPOSAL OF or PURCHASING SHARES, INSPECTING MINES, &c., on the most moderate and honourable terms.

**MR. JOHN PHILLIPS, MINERAL SURVEYOR and MINE MANAGER**, MARGARET-STREET, NORTH ADELAIDE, in the province of SOUTH AUSTRALIA, after three years' residence and two years' exploration in the colony, RESERVES his EXPERIENCE for BRITISH CAPITAL: availing the result of this advertisement in a suitable remuneration for past time and future services.

REMOVED.—104, Bishopgate-street-within.

**MR. PEET, MINING AGENT and GENERAL SHARE BROKER**, has REMOVED to the ABOVE CONVENIENT OFFICES. The same attention paid as hitherto to all MINING BUSINESS of legitimate character; and in thanking his friends for former commissions, he solicits a continuance of their kind support.—Offices of Wheal May, Pentire Glaze and Pentire United Mines, Devon Consols West, and Wheal Hamlyn.—The strictest confidence observed in all transactions, and the registry of shares will be free, unless a sale or purchase takes place.

**MOLYNEUX & CO., MINE AGENTS, No. 34, THREADNEEDLE-STREET**, have SHARES on SALE in DIVIDEND-PAYING and OTHER MINES, which will ensure to CAPITALISTS the safest and most unexceptionable investment.

\* \* \* Office of the Wheal Langford and Baring United Mining Company, and Trebell Consols Mining Company, No. 34, Threadneedle-street.

**MR. THOMAS JORDAN, METAL BROKER**, No. 75, OLD BROAD-STREET, CITY, exclusive AGENT for one of the BEST MAKERS of HAMMERED IRON, for MARINE, LOCOMOTIVE, and other ENGINES. Also AGENT for the SALE of SOUTH STAFFORDSHIRE and WELSH BAR, BOLT and BOILER PLATE IRON, in all its varieties.

The Proprietors of Lead and Copper Mines in Devon, Cornwall, Wales, &c., will find great advantage in the quality and cheapness of the Iron they require, by seeking quotations through the Advertiser.

**MINING, AUCTION, and GENERAL AGENCY OFFICE**, No. 3, GEORGE-YARD, LOMBARD-STREET, LONDON.

Messrs. TREDINICK & CO. beg to inform their Friends and the Public that they continue to TRANSACT EVERY DESCRIPTION of MINING AGENCY BUSINESS, and have ON SALE SHARES in most of the DIVIDEND MINES in CORNWALL, DEVON, and WALES, as well as those on the eve of paying, and situate in the best mining districts.—Loans and Money Matters in general negotiated; Mines Inspected, and Reports obtained from practical agents, and every information affecting the market value of mining property afforded gratuitously.

**MINING OFFICES.—ST. MICHAEL'S CHAMBERS**, ST. MICHAEL'S-ALLEY, CORNHILL.—MR. R. TRIPP has for bond sale SALE SHARES in most of the BEST DIVIDEND MINES, including the following:—Trelawny, Alfred Consols, Wheal Reeth, Wheal Margaret, South Caradon, South Tolgus, Devon Great Consols, Wheal Tremayne, Sparrow Consols, West Buller, West Caradon, Bedford United, East Pool, Stray Park, North Pool.

And in others having present and prospective advantages, including Wheal Arthur (Calstock), South Tamar, North Wheal Buller, Great Wheal Badden, Wheal Treasury, East Tamar, Bodmin Consols, East Ballowidden, Wheal Speedwell, Wheal Lorn, East Cromdale, Tincroft, West Alfred Consols, Balmoon Consols, West Wheal Treasury, Great Alfred Consols, East Wheal Russell, Wheal Zion, Penzance Consols, Hingston Down, Devon and Courtenay, Hancock Lead, Wheal Langford, &c.

FORBLOW.—Copley, St. John del Rey, Linares, Worthing, &c.

**REGISTRY FOR THE SALE and PURCHASE OF MINING SHARES.**

**DURRANT & CO., MINING SHAREBROKERS**, 59, LOMBARD-STREET, LONDON, beg to draw the attention of CAPITALISTS to their REGISTRY for the SALE and PURCHASE of SHARES.

SHARES FOR DISPOSAL.

|                     |                |                   |
|---------------------|----------------|-------------------|
| Devon Great Consols | Wheal Mary Ann | South Caradon     |
| Carn Bros           | Wellingtons    | Great Wheal Sheba |
| West Caradon        | West Buller    | Trelawny          |
| Trelawny            | Tolgus         | Bedford United    |

N.B.—Statistical information furnished on British and Foreign Mines.—No Charges made for the registration of shares unless business be transacted.

### MINING RECORD OFFICE.—SUPPORTED BY MINING ADVENTURERS and OTHER CAPITALISTS.

The want of a convenient place of reference in London, where gentlemen may obtain authenticated, disinterested, practical, and scientific information on subjects connected with our subterranean industry, has been long felt. Hitherto it has not only been imperfectly procured from interested parties, but frequently so ambiguous and incoherent as to mislead the uninitiated—thus creating a total want of confidence, and bringing discredit on the science of mining. There is no branch of industry at present where there is so much capital employed, both at home and abroad, without any definite system, or a place of reference to guide the capitalist, as mining. The opinion of an ordinary miner, conveyed through the medium of interested promoters, being often the only inducement to carry on a mine; and when any doubt arises on the character of the speculation, or the qualification of the parties to manage the same, or its intrinsic value, there are no means at present by which such questions can be satisfactorily decided, without incurring much time and expense—hence the cause of so many disappointments and heavy losses.

To remove these inconveniences, and remedy the evils now complained of in mining speculations, and to promote a more general practical and scientific knowledge of mining amongst those who invest, and have an interest in the pursuit, Mr. HOPKINS intends to take larger OFFICES, for the DEPOSIT of the RECORDS of MINING, with GEOLOGICAL and MINING MAPS, PLANS, &c., SPECIMENS of MINERALS, DRAWINGS and MODELS of MACHINERY, BOOKS, &c.—In short, every thing connected with MINING and GENERAL SCIENCE. To be arranged and open daily from Eleven to Four, together with supplying periodical advice and instructions for the benefit of members paying annually £5. The establishment will be carried on on the same principle as the present office—viz.: free from party interest and dealings in shares, and strictly confined to that of furnishing useful and authenticated information at all times.

When 300 have subscribed their names as members, a certain number will be appointed as trustees of the institution, as a guarantee to the members that the rules which will be adopted be strictly adhered to, and that no persons are admitted as members but those approved of by a committee. Those who intend to become members, or annual subscribers, are respectfully requested to enter their names in the book now open for that purpose, at Mr. Hopkins's office, No. 13, Austinfriars, where further particulars may be obtained.

**MINING PROPERTY.—Mr. HERRON has SHARES in** the best DIVIDEND-PAYING MINES FOR SALE, and which will give the purchaser 15 to 20 per cent. for the outlay. Amongst others are the following:—

|                     |                |                  |
|---------------------|----------------|------------------|
| South Caradon       | Wheal Golden   | Tremayne         |
| West Caradon        | Lewis          | West Providence  |
| Mary Ann            | Trelawny       | Coburn           |
| Wheal Trelawny      | North Bassett  | St. John del Rey |
| Devon Great Consols | South Bassett  | Copland          |
| Bedford United      | Alfred Consols | &c. &c.          |

And has also FOR SALE SHARES in MINES having a PROMISING APPEARANCE, and affording greater range for speculation, such as—

|             |                |                     |
|-------------|----------------|---------------------|
| Tincroft    | North Downs    | West Towan          |
| Tamar       | Trelawny       | East Wheal Leisure  |
| Callington  | Cook's Kitchen | East Tolgus         |
| South Tamar | Stray Park     | West Alfred Consols |

Mining Offices, 33, Clements-lane, Lombard-street.

**SHARES FOR SALE in the following MINES:—**

|                 |                        |                  |
|-----------------|------------------------|------------------|
| Lerant          | United Mines (Gwennap) | Providence Mines |
| Wheal Reeth     | West Alfred Consols    | Great Work       |
| Ballowidden     | Wheal Franco           | Wheal Henry      |
| Sparrow Consols | West Wheal Towan       | Leland Consols   |
| Wheal Margaret  | Trelawny               | &c. &c.          |

B. P. BATTEN, 1, Crown-court, Old Broad-street, London.

**MR. GEO. CARNE, DEALER IN STOCKS and SHARES**, 29, THREADNEEDLE-STREET, LONDON.

**MR. JOHN DAVIES, MINING SHAREBROKER**, No. 38, TOWER-BUILDINGS, TOWER-GARDEN, LIVERPOOL.

**MR. ALFRED SENIOR MERRY, DEALER IN COBALT and NICKEL ORES, and ASSAYER in GENERAL**, Address: LEE-CRESCENT, BIRMINGHAM.

**PROPOSED NEW VINEGAR MANUFACTORY**—As a PROFITABLE INVESTMENT.—Some important CHEMICAL IMPROVEMENTS having been lately made and rigidly tested in the MANUFACTURE of VINEGAR, the Inventor and Proprietor—who has had 30 years' practical experience in the business—wishes to TREAT with a CAPITALIST or COMPANY, for the purpose of MANUFACTURING the ARTICLE on an extensive scale, from which a handsome dividend can be realised, without the slightest risk, and so pure and exquisite a vinegar produced, that it cannot fail to command a ready sale.—Letters addressed to "A. A." care of Mr. Chas. Jarvis, 38, Great Castle-street, Regent-street, London, will open a correspondence.

**WANTED.—ARSENICAL PYRITES**, containing not less than 24 per cent. of copper, and from 33 per cent. of arsenic. Those having such at their disposal, can communicate with "B." at the office of the Mining Journal, 26, Fleet-street, London.

**WANTED.—A MINING CAPTAIN**, fully competent to undertake the MANAGEMENT of a SILVER-LEAD MINE in CARDIGANSHIRE. Applications and testimonials as to character and efficiency, forwarded to Messrs. J. H. Smith, 96, Cornhill, will receive immediate attention. All letters must be pre-paid.

**CALSTOCK UNITED MINES.—WANTED**, for these MINES, a SECOND-HAND STEAM-ENGINE, from 40 to 50-horse cylinder, capable of pumping, crushing, and drawing. Price and particulars may be forwarded to the purser, Mr. Frederick Cleverton, solicitor, Plymouth; or to the Secretary, Mr. Geo. Carne, at the Company's offices, 28, Threadneedle-street, London.

**MINING PROPERTY.—A Gentleman, who has GRANTS** of several splendid MINERAL SETTS in CUMBERLAND, SCOTLAND, WALES, and CORNWALL, desires to meet with a CAPITALIST who will JOIN him in DEVELOPING THEM.—Address to "V. V." care of Mr. Hooper, Thavies Inn, Holborn.

**TO CAPITALISTS.—TO BE SOLD, a first-rate SLATE** QUARRY, on the true Bangor Vein, near to a shipping port in North Wales, to which there is a tramroad. The quarry is an open quarry, and will require no machinery. In soundness, colour (purple), and split, a more beautiful slate rock is not to be seen in the Principality. So favourable an opportunity for investment rarely offers itself. For further particulars apply to Mr. Evan Hopkins, C.E., 13, Austinfriars, London.

**AVE-MARIA GOLD QUARTZ MINE.—DISTRICT of MARIPOSA, CALIFORNIA**—Applications for shares in this mine are to be made at the office of the Association, 114, Bishopgate-street-within (where all particulars may be had); and at the offices of Messrs. Watson and Cuel, St. Michael's-ally, Cornhill.

**CHYPRASE CONSOLS TIN and COPPER MINE**—NOTICE.—The COMMITTEE of CHYPRASE CONSOLS MINING COMPANY deem it advisable to inform PARTIES connected with MINING PROPERTIES, that the SHARE LIST will CONTINUE OPEN for a SHORT TIME longer, after which it will finally close. Therefore, immediate application for the remaining shares is absolutely necessary. Applications for shares to be made to Mr. Thomas Lewis, 17, New Meeting-street, Birmingham, Purser to the Company.

**ST. AGNES BEACON TIN and COPPER MINE**—CORNWALL.—In 2900 shares, of £1 1s. each. THE LETTERS of ALLOTMENT will be POSTED to APPLICANTS on SATURDAY, the 11th inst.—2, Cophthall-court, October 4, 1851.

**COPIAPO MINING COMPANY**—Notice is hereby given that a DIVIDEND of FIVE SHILLINGS per share will be PAID on the shares of this Company, at the office, 22, Austinfriars, on Friday, the 10th October next, and following days. The dividend warrants are required to be left at the office two days for examination.—Please call between the hours of Twelve and Two. 22, Austinfriars, Aug. 1. By order of the Directors, ROBERT CLARK.

**IMPERIAL BRAZILIAN MINING ASSOCIATION**, Winchester-house, Broad-street, London, Oct. 1, 1851.—THE TRANSFER BOOKS will CLOSE on Wednesday, the 15th inst., and re-open on the day after the General Meeting in November, of which due notice will be given.

GEORGE THOMAS, Acting Director.

**CEFN GWYN SILVER-LEAD MINES**—Notice is hereby given, that a GENERAL MEETING of the shareholders in these Mines will be HELD at the George and Vulture Tavern, Cornhill, on Monday, the 18th inst., at Twelve o'clock precisely.—Oct. 2, 1851. JOHN BOWEN, Secretary.

**TRELEIGH CONSOLIDATED MINING COMPANY**—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders will be HELD at the offices at under, on Wednesday, the 9th of October next, at Twelve for One o'clock precisely. The accounts will be at the same time for the inspection of the shareholders two days previous to the meeting. 57, Old Broad-street, Sept. 18, 1851. W. M. NICHOLLS, Secy.

**STIRLING'S PATENT ALLOYS—RAILWAY CAR** RIAGE BEARINGS, MILL BRASSES, and all DESCRIPTIONS of CASTINGS are MANUFACTURED by ALFRED BARRETT, Bishopgate Foundry, Skinner-street, SOLE LICENSEES FOR LONDON.

BELLS of very superior quality (Stirling's Patent) are also SUPPLIED.



## IMPROVEMENTS IN THE MANUFACTURE OF SULPHUR CARBONATES OF BARYTES AND STRONTIA, &amp;c.

Mr. Herbert Taylor, of Finsbury, has patented some improvements in the manufacture of carbonates and oxides of barytes and strontia, sulphur or sulphuric acid from the sulphates of barytes and strontia, and for consequent improvements in the manufacture of carbonates and oxides of soda and potassa. To produce the carbonates of barytes and strontia, and sulphur or sulphuric acid, according to this invention, sulphate of barytes or strontia is reduced to the condition of a sulphuret by calcination in a suitable vessel or furnace, when mixed with the requisite quantity of carbon or carbonaceous substance, or by exposure to an incandescent current of carbonic oxide. The sulphuret, in conjunction with water, or what is still better, entirely dissolved, and decanted from any remaining insoluble matters, is placed into suitable close vessels, and a current of carbonic acid gas, generated by any suitable process, is made to pass into the liquid. A carbonate of the base of the sulphuret employed precipitates, and sulphuretted hydrogen is evolved, which, on being conducted through appropriate apparatus, is either ignited in contact with just sufficient atmospheric air to convert its hydrogen into water (proper precautions being taken to prevent explosion), or the sulphuretted hydrogen is brought into contact with nitrous acid vapours and an excess of atmospheric air. Whichever of these methods be adopted, sulphur will be set free, and deposited by conducting the gases or vapours through suitably arranged chambers. When it is desired to obtain sulphuric acid, the sulphuretted hydrogen is ignited in an excess of atmospheric air, and is thus converted to sulphurous acid vapours, which are then conducted into apparatus such as usually employed in the manufacture of sulphuric acid, and treated therein in the manner ordinarily adopted in such cases. When the decomposition is completed (which is indicated by the evolution of sulphuretted hydrogen gas ceasing, or by testing the liquid in the decomposing vessel with lead paper, which should not change colour), the liquid is drawn off, and the carbonate separated.

To obtain the oxides of barytes and strontia, the carbonates of these bases are subjected to intense heat in a suitable furnace, until the entire evolution of their carbonic acid takes place, which will be materially assisted by the injection of steam, by which an hydrated oxide will be produced. Or, if when making the solution of the sulphuret of strontia or barytes, the same be in a boiling state and highly concentrated, and then allowed to cool, almost half of the base will be crystallised in the form of hydrated oxide, and a hydrosulphated sulphuret will remain in solution; this, on being evaporated in close vessels after separation from the crystals, will part with its sulphuretted hydrogen, and a small portion of sulphur will be sublimed. The escaping gas (the watery vapour being first condensed) can be treated and converted into sulphuric acid, as before mentioned. A simple sulphuret of the base employed will remain in the vessel, which, on being redissolved, may be passed repeatedly through the same process as above, until the whole of the oxide and sulphate of the base have been obtained; the hydrated crystals can then be purified from the portion of sulphuret adhering to them by washing or re-crystallisation, and can then, if thought proper, be converted to carbonate by exposure, in a moist state, to carbonic acid, or by passing a current of that gas into a solution made of the crystals in water. To produce carbonate of soda or potassa, the sulphates of these bases in solution at the ordinary temperature are brought into contact with the carbonate of barytes, when mutual decomposition takes place, which is greatly accelerated and perfected by passing a current of carbonic acid into the mixture. By this process, sulphate of barytes is formed, and carbonate of soda and potassa remains in solution, and may be obtained by crystallisation, or by evaporating the solution to dryness. To obtain hydrated oxides, or caustic soda, or potassa, the oxides of barytes or strontia (the latter being much more readily reducible from the carbonate, is preferable) are slacked with water into a thin paste, to which a proportionate solution of sulphate of soda or potassa is added, when sulphate of barytes or strontia precipitates, and the caustic soda or potassa remains in solution, and may be decanted and used in that state, or evaporated to dryness, and converted to a hydrated oxide, by melting it at a lowered temperature. The carbonate of strontia may be also used to decompose the sulphate of soda or potassa, in conjunction with carbonic acid; but this material is very inferior to baryta for the purpose, as, without the aid of carbonic acid, no decomposing effect would be produced.

Claims: 1. The combined process of manufacturing sulphur or sulphuric acid, carbonates of barytes and strontia, and their oxides, from the sulphates of these bases, by the before-described methods.—2. The making of carbonates of strontia and barytes and their oxides from the sulphates of these bases by the methods described.—3. The producing of sulphur or sulphuric acid from sulphates of barytes or strontia by the method above mentioned.—4. The manufacture or improvement in the process of producing carbonates of soda and potassa, by treating or decomposing the sulphates of these bases by the carbonates of barytes or strontia, employing in aid thereof a current or sufficient quantity of carbonic acid, as described; the use of carbonic acid being optional with baryta, but imperative with strontia. The patentee does not claim the production of the oxides of barytes or strontia by the calcination of the carbonates of these bases, when the carbonates are produced or obtained in any other than the method or manner before described.—*Mechanics' Magazine.*

**ROLLING AND LAMINATING METALS.**—Messrs. Robertson and Glover, engineers, of Holloway, have specified their patent for improvements in the rolling and laminating of metals, and in the manufacture of metallic cases and coverings. The object of the improvements under the first head of this invention is to produce as may be required a uniform elastic pressure, or a uniform dead pressure on both ends of the rolls employed for rolling and laminating metals. For this purpose a cross-head of the same length as the rolls, and capable of sliding up and down immediately over them, is mounted in the same frame, and to each end of this cross-head is attached by keys a rod or plunger, which bears against the brasses fixed at the ends of the rolls. The centre of the cross-head is hollowed out of a cylindrical form, and a coiled spring is inserted and inclosed by a plain disc of metal. A nut is tapped through the centre of the bridge-piece at the top of the frame, in which works a screw turned by a hand-wheel, and bearing upon the disc over the spring in the centre of the cross-head. By turning the hand-wheel, the screw may be lowered, and the cross-head and rods attached thereto caused to descend and act on the rolls so as to produce a uniform elastic pressure at both ends, which may be increased to any desired extent by lowering the screw. When a dead pressure is required the spring in the cross-head is dispensed with, and the screw made to act against a solid abutment. Another method of producing an elastic pressure on the rolls is by the application of hydraulic power, and in this case the cylinder in the cross-head is to be connected with a force pump, and the pressure produced in the ordinary manner. The second part of the invention has relation to a method of making boxes, cases, or coverings from William Betts' patent metal, from tin foil, or Betts' patent metal pasted or glued on paper, and variously ornamented. The method of making boxes or coverings from Betts' metal is as follows:—The patentees take a slightly-tapering block of iron of any desired form, and wrap round it a sheet of metal of about the 300th part of an inch thick, and of such a size that the edges just overlap; a small portion also must be allowed to project over the smallest end of the block; they then run a slightly-heated soldering bit or iron along the overlapping edge (using a copper straight-edge as a guide), so as to cause the two parts to adhere. They then fold in the projecting part of the sheet of metal over the small end of the block, place upon it a piece of slightly less size than the end of the block, and run a soldering-bit along the edges of that piece, and thus finish the covering, which is then to be drawn off from the block. The use of solder is thus entirely dispensed with. In order to prepare tin foil or Betts' metal for use, it is glued or pasted to paper, passed through a pair of flattening rollers, and then embossed or ornamented with transparent colours, mixed with turpentine or copal varnish; or it is coated with varnish, and then ornamented by sprinkling it with flock. The metal paper, thus prepared, may be used for paper-hangings and various other purposes, as well as for the manufacture of boxes, cases, or coverings.

Claims: 1. The producing a uniform elastic pressure on each end of the rolls in the rolling and laminating of metal.—2. The producing a uniform dead pressure on each end of the rolls in the rolling and laminating metals, by means of the arrangements described.—3. The manufacture of William Betts' patent metal in the manner described.—4. The manufacture of metallic coverings made wholly or partly of tin foil, or of W. Betts' patent metal, pasted or glued on paper, and embossed, painted, or otherwise ornamented, as described.—*Mechanics' Magazine.*

## MINING ENTERPRISE—ITS PROGRESS AND PROSPECTS.

We resume this important subject from the point where we left it in last week's impression, and we now arrive at those copper mines that in the quarter ending at Midsummer last had not sold 115s. worth of that metal. The first is Wheal Crebor, the sale from which mine was 33 tons, at 3l. 8s. per ton = 112l. 11s.; and as we now have the returns to Michaelmas, we furnish them—viz.: 34 tons, at 3l. 18s. = 132l. 12s. Great expectations having been formed as to the certainty of meeting with rich ores, productive lodes, speedy profits, and the promise of early dividends, is our reason for tracing back to the period of its commencement, without intending to say ought that may be prejudicial to the concern, its founders, or managers—but to show how fallacious it is for parties, on resuming mines that have been idle for years, expecting to meet with immediate and certain riches. Our ancestors, before they shut up a mine, took especial care to take away all the ore in sight that would pay them for so doing; and this, it is evident, was the case in the present instance, as we shall attempt to show by reference to our own pages. In our Journal of May 18, 1850, it will be seen that the original starting of Wheal Crebor was owing to the intersection of some lodes, discovered by means of cutting the canal from Tavistock to Morwelham Quay; and at a meeting held at the former place, on March 16, 1803, the Duke of Bedford was requested to grant a sett for 42 years, at one-tenth dues, to the Canal Company; this being acceded to, they proceeded on, and in August made discovery of a copper lode. In March, 1805, 20 tons of copper ore were sold for 110l. 17s., being 5l. 10s. 9d. per ton average. To the end of 1810, they expended 5216l. 17s. 9d.—commencing to make profits in 1811, which continued to the end of 1824, leaving a clear balance of 38,271l. 2s. 2d.,—reduced by the loss of 3649l. 15s. 2d., in the three following years, to 34,621l. 7s. Cock's shaft was down 45 fms., Smith's 100, Kelly's 135, and Rundle's 104 fms. from the surface, the adit level being 48 fms. deep. This latter, and most westerly shaft, being close to the boundary of the sett, the levels could not be extended further; and the then proprietor of the adjoining land declining to grant it, the adventurers were unwilling to incur the expense of sinking deeper; consequently, the concern was abandoned in the year 1828. In 1844 a company started it again, laying out about 2000l. in trial upon parallel lodes. From the inability of some of the shareholders to pay the calls, the concern was again abandoned.

The present company was formed in the early part of last year, in 1024 shares, 874 of which paid the deposit, 1l. 10s. each = 13114l. paying 325l. for the sett and water-wheel as it then stood, the valuable feature being an extension of Mr. Beauford's ground, west from Rundle's shaft, of 220 fms. in extent, for about 100l. more, including charges. The sett, which is very extensive, immediately adjoins the Bedford United Mines, traversed by some of their lodes—the main one in both being the Liscombe. Near to the entrance of the canal tunnel there is a large cross-course: the former profits were derived from the lode making close home to it, and the same result was expected wherever it crossed the other lodes—particularly one to the south. There are three other cross-courses in the sett, and two flookany slides; the main lode has been explored 750 fms. in length at the adit level; the deposits of ore held down to a 60 fm. level at Smith's and Kelly's shafts; the course of ore in the 24 fm. level (the longest) was upwards of 100 fms., and near Gill's shaft it produced from 15 to 16 per cent.; parallel with this lode are several others, all of which are within a limit of 40 fms. north and 25 fms. south of it, at the surface, in a stratum of killas favourable for copper ore; but an unfavourable change in the nature of the killas west of the slide, at the 40 fm. level, takes place—the adit level having been extended 120 fms. without discovering any ore.

The mine is favourably reported on by Messrs. Arthur Dean, Murray, and Wolferstan—the former recommending explorations of the side lodes near Gill's, and the shafts before-mentioned, concluding with this observation:—"If our expectations of discoveries in those localities are at all realised, I think 1200l., with judicious management, will more than put the mine in a self-supporting position. The 40-ft. wheel is of power sufficient for all the requirements of the mine for many years." The shares were soon at 100 per cent. premium—the 40. west of Rundle's, being reported by the agent in September to have a leader of ore from 6 to 10 in. wide, and a "sample, as broken from the lode, produced 19½ per cent. for copper, leaving backs that will work at a low tribute." This sent the shares up to 3l. 10s. each. The report that followed stated—"In costeaning we have discovered five south lodes, three of them averaging from 6 to 8 ft. wide, composed of gossan, &c., with spots of copper ore; four of them not 15 fms. from the southernmost lode to the north one."

Great expectations were then formed that the lode in the 40 west, and the driving upon the several lodes in the adit (60 fathoms deep in virgin ground), would speedily reach a good course of ore, when they would derive all the benefit anticipated. On the 21st of November, the first sale of copper ore took place, 23 tons 13 cwt., at 3l. 9s. per ton = 79l. 11s. 11d. To the end of the year 15s. per share calls were made, making 2l. 5s. paid, and still maintaining the same rate of premium as quoted the 8th and 15th February—5l. and 6l. each. The month following, 6l. 10s. to 6l. 15s., when the report stated that "the lode in the adit was 5 to 6 ft. wide, saving work for copper; we are about the junction of two or three more of the lodes; if so, we shall look about for a quantity of it." This ran the shares up to 7l. and 8l. each, or full 300 per cent. premium—the end being priced as worth 12l. per fm. The various lodes were, however, frequently heaved and disordered by meeting with the cross-courses. The first report in May announced the second sampling, 33 tons, which sold for 112l. 11s., or 3l. 14s. 3d. per ton; and that they had commenced dressing for sampling again in June—the estimated value of the ore in the pitches working being from 500l. to 600l. On the 29th April another call of 5s. was made; and on the 17th May the 54 was reported to be turning out 2 tons per fathom. "A pitch in the back is 3 ft. wide; fine work for copper—in fact, a good ore lode." The purchase of an engine was at this time decided upon, and a call of 10s. per share made in pursuance thereof on the 27th May, followed by another of the same amount on the 29th August, making a total of 3l. 10s. per share.

The remainder of their ore sales have already been given; the shares being in good hands, have never been at any other than at a premium, and they remain so at the present moment. We have for some time been of opinion that steam should have been employed sooner, for rich bunches of ore seldom stand by themselves, and either make again under or on parallel lodes, and this we hope may be now speedily the case by the steps taking; at all events, it will take less time to prove whether so or not in this quarter, and time saved in mining operations is as money gained. The engine having so recently gone to work, we hope the samplings will soon speak for themselves. The company have our best wishes.

East Godolphin Copper Mine, in Cornwall, was set to work on the 4th April, 1849, in 256 shares, upon the Cost-book System. They resolved at once to sink a new engine-shaft from the surface, and erect a suitable steam pumping-engine for effectually working the mine in depth. In July, this was purchased and delivered upon the mine (a 41-inch cylinder), the house to receive it up and covered in, at a cost of 759l. 2s. 9d. The shaft was down 12 fathoms, and calculated to take two lodes at their junction, somewhere about the 50; they then met with harder ground than expected in the shaft; consequently, were only down 34 fms. in February following—being 18 fms. below the adit; and up to the 1st of August they were sinking below the 30 fm. level in a hard black killas, seeming determined to persevere as originally intended, and see the junction of lodes in the 50. The expenditure has been 22l. 10s. per 256ths—say, 5760l.; and as yet the sale of copper ore has only realised 261l. 5s. 11d.—being 78 tons, at 3l. 7s. average, 105l. of which was in the quarter ending June; and on Thursday next they have 14 tons for sale. This concern is an example of what "one and all" are capable of doing when they earnestly set about it. There are no arrears of calls; all respond to them cheerfully. The bills are charged, and regular account meetings held, whereby confidence is strengthened; and we should be happy at an early day in being able to record that they were in as prosperous a state as the original Godolphin was two score years ago.

[To be continued in next week's Mining Journal.]

**RAILWAY CALLS.**—The amount falling due in October is 348,873l.—making a total for the first ten months of the year of 5,139,924l. In the same period of last year the calls were 10,003,989l., and in 1849, 18,340,964l.

**A PRODUCTIVE RAILWAY.**—The most productive railway in Germany is that from Furtth to Nuremberg, which is, at the same time, the shortest and the oldest of all the lines which exist on the Germanic territory. This line, which is only about a league and a quarter, French measure (about 34 miles English), was constructed at a cost of 200,000 florins (500,000 fr.); the gross receipts, in 1850, amounted to 58,388 florins, and the expenses to 31,471 florins, leaving to the shareholders a net profit of 26,917 florins, or 13½ per cent. on the capital. During the fifteen years that this railway has existed more than 7,000,000 of persons have passed over it; out of whom only one passenger has met with any injury, and that was by his own imprudence.

## Original Correspondence.

## THE MINING INTEREST.

Sir,—I think the public at large, and the mining public in particular, are under great obligations to you for your just and watchful guardianship of their interests as to new mines, which are from time to time brought forward, as well as for the suggestions and admonitions with which you have recently supplied them, as to the probabilities of success, and the consequent value of shares, in some of the new undertakings which are at this moment in the market. Mining is now a not unimportant branch of our occupation as a commercial people, and whatever contributes to give it an intelligible and safe footing in the commercial world is certainly so much done for its beneficial furtherance and permanent prosperity.

There is always some danger, that in recommending caution to those who are about to take up mining property, we may appear to sanction a timid policy on the part of those who are for the moment purchasers; or, on the other hand, when decision and boldness, the very essence of all bargaining, is recommended, that we may be construed to counsel mere desperation. It is the happy line between these extremes which furnishes the golden mean; and when a man about to take up mining shares rather heavily, carries himself in the market without fear on the one hand, and without precipitation on the other, his mind is in that admirable state of equipoise and adjustment which fits him for, and will carry him successfully through, the business to which he addresses himself. There are no cabalistical secrets connected with the merchandise of mining shares, and the application of common integrity and common sense to this description of traffic will effectually bring it within the precincts of general and everyday commerce.

In all departments of business there are prizes and blanks, and I believe the former are of as frequent occurrence in mining as in most other occupations, with this additional recommendation and advantage, that in this particular department of industry they often enrich—as in the case of Wheal Bassett and the Devon Great Consols—first the fortunate purchasers, and then their posterity. But taking the ordinary and everyday course of mining investments, they fully equal, if they do not outrun, in productiveness those to which a much larger amount of public capital is with us directed throughout the year. I beg to submit these few remarks, both as a caution and an encouragement.

London, Oct. 2.

OBSERVER.

## THE MINING EXCHANGE.

Sir,—Having noticed lately much correspondence in your valuable Journal relative to the formation of a London Mining Exchange, and which appears to me to be as far off as ever from being really established for any ultimate good, I send you some few particulars of what is doing in this city, with somewhat similar views; and to show you that while you London miners, after months of consideration, are still only thinking about the matter, no sooner is the proposal started by one or two individuals here, than our go-ahead adventurers immediately arrange all the preliminaries, and the whole affair is placed on a footing fit for acting upon in next to no time. As in England, mining in the United States is rapidly extending, and the large amount of money employed, and the great attractions which this species of investment presents to capitalists, has caused the necessity of an establishment where parties interested can meet, companies be formed, correspondence received, correct mining information be diffused, shares bought and sold, and, in fact, where general knowledge may be obtained, and the multifarious transactions growing out of this important interest be conducted with order, propriety, and certainty. The New York Mining and Mineral Exchange will be supported by subscriptions; each subscribing company will have its true character registered for the use of the public, embracing its actual condition, a copy of its charter, the names of its officers, amount of capital, paid up and expended, work done, the general products, geological surveys, reports of engineers and agents, with all other facts necessary to be known to acquire a knowledge of the property, while the progress will be reported on occasionally, as may be required. Each subscribing company to be allowed a representation by its nominee or one of its officers, with free access to the rooms at all times without charge. Individual subscribers will have the free use of the rooms, registers, and all information which will convey a knowledge of the value of shares and the position of the several adventurers. The object of this institution being to uphold legitimate mining and ascertain the real value of all undertakings, the shares of which are brought into the market, the most rigid inquiries will be made, and only such companies countenanced and held up as worthy public support as are known to have character, capital, and good mines. This, Sir, is an outline of the principles on which the New York Mining and Mineral Exchange will be based. The subject is causing a good deal of business-like excitement among capitalists and others interested in mining pursuits, and I have no doubt, before another month has elapsed, we shall find this institution firmly established on a useful and lasting basis.—G. W. T.: New York, Sept. 6.

## THE SHARE MARKET.

Sir,—The mining share market is in a rather languid state, and most persons are, or profess to be, puzzled to divine the cause. The sensation is something like that of a calm after a storm, but scarcely so pleasant. Let us try our hand at a solution: some four months since the longest summer's day was not long enough to enable the broker to clear up his diurnal correspondence, and that was just the period which produced the evil, or the present reaction. Then the business was rife, in schemes of 10,000 or more shares, at 1l. up to 2l. and 3l. per share, and mostly premium: leaving, consequently, little to work out the mine, whether it happened to be a virgin piece of ground or an abandoned sett, or a locality enjoying the prestige of some fortunate and well-known mine paying dividends—for example, the Devon Great Consols, the birth of which has resulted in more loss to neighbouring mines than all its gains, whether from supposed lodes east or west, or north or south of it. Then, in these new concerns, comes the period of calls, and every adventurer begins to think of selling—a very natural move; but the "office" in which the mine originated can give no relief; their advice is "to hold," meaning, we cannot buy: move the next is, that the shares are offered gradually, or simultaneously, to half-a-dozen brokers or dealers, and a "glut" is the consequence. This I take to be the phase of the mining market at this moment, and thus the depression has its origin solely in the mining market itself, for where do you hear complaints of scarcity of capital? Certainly not when good dividend shares are offered. To offer is to sell. But the evil of the present state of things lies in the utter neglect of good non-dividend mines, of which a long list might be given; there is certainly about them, but the buyer wants excitement—he is, in fact, in the position of Sir Charles Coldstream (Charles Matthews) in *Used Up*, as described by his valet—"Nothing excites him, he cannot feel!" but, by-and-by, let us hope there will come a Lady Clutterbuck, and set his pulse in motion in a right direction; and that will be towards good, solid, tried concerns, in which little more capital is wanted to bring all the money expended upon them back again, and a dividend at the end of it.—OBSERVER: Oct. 3.

## THE COST-BOOK PRINCIPLE.

Sir,—Your correspondent, "Jurisconsultus," whilst professing to treat this subject only in a popular manner, has brought much legal research and acumen to bear on it. The question in dispute, however, is strictly a legal one; and, as it is very important, perhaps I may be allowed to offer a few observations. Is, or is not, the exception in the Act, 7th and 8th Victoria, c. 110, confined to companies formed for working mines, &c., in Cornwall? That is the question. The enacting part of that statute is general, and extends to all joint-stock companies formed in the United Kingdom, divided into shares, transferable without the consent of all the partners. The exception is, in its terms, as general as the enactment, and declares that the Act shall not extend to any company for working mines, minerals, or quarries of whatsoever kind on the principle commonly called the Cost-book Principle. There is nothing here to confine the exception to Cornwall; and the burden of proof lies on those who attempt so to confine it. And what is their case?—1. It is said by some that the Cost-book System is a mere local custom, known and recognised only in Cornwall; and that, therefore, it cannot be adopted out of that county.—2. It is said that the system can only exist where there is a peculiar court—"the Stannary Court"—to carry out its principles; and that, as this peculiar court exists nowhere but in Cornwall, it follows that the system cannot legally exist elsewhere. This latter, I believe, is your argument.

Now, my firm impression is that neither of these propositions will bear examination. The first scarcely requires to be confuted.—1. That the system is local, and is established as a custom only in Cornwall, may safely be admitted; but the alleged inference does not by any means follow. There are customs peculiar to the City of London, and known and recognised, and having the force of law amongst merchants and factors there, and nowhere else. But suppose that two merchants, residing and trading at Liverpool, enter into a written contract, and engage that the particular dealing mentioned therein shall be understood according to, and be governed by, the rules and customs which prevail in the City of London on the same subject; could it be argued for a moment that such an agreement would not be binding on the contracting parties, or that it could not be enforced in a court of law according to its terms? Assuredly not. In just the same way parties, forming a company to work a mine out of Cornwall, may enter into a written engagement that their mine shall be worked on the Cost-book System; and that they will be bound by the rules of that system, as known and established in Cornwall. There is nothing to make such an agreement, *per se*, illegal.—2. But you say that such an agreement is in effect illegal, inasmuch as it cannot be carried out, as no court, except the Stannary Court, which exists only in Cornwall, can take cognisance of the Cost-book System, or can enforce its rules and regulations. Now, this argument assumes that the Stannary Court has exclusive jurisdiction in Cornwall over cost-book companies; for if it be not so, and if the superior courts at Westminster have concurrent jurisdiction, what becomes of the argument then? And has the Stannary Court any such exclusive jurisdiction? The superior courts cannot be ousted of their jurisdiction over any person or any matter in



England or Wales, except by express enactment, or by charter, perhaps. Local courts have no exclusive jurisdiction in their particular localities, but only a concurrent one with the superior courts. If any person thought it worth his while to file his bill in the Court of Chancery, instead of his petition in the Stannary Court, depend on it the former court would not submit to be told that it had no jurisdiction. And what is there to prevent the superior courts from carrying out and enforcing the rules and regulations of the cost-book? They have the same machinery as the Stannary Court, and far more power to enforce their decrees and judgments. If a local custom has, in process of time, obtained the force of law in its locality, the superior courts will recognise it and give effect to it; but even if it were established that the superior courts had no jurisdiction in Cornwall over cost-book companies, the argument would be very little advanced; for it would not follow that they had no jurisdiction out of that county. If parties can elsewhere bind themselves to be governed by the cost-book rules, as I think I have shown that they can, the superior courts will find means to compel them to abide by their contract.

But, independent of all this, there is one point mentioned by "Jurisconsultus" which appears to upset all argument founded on the imaginary exclusive jurisdiction of the Stannary Court. This Act expressly excepts all companies formed for working quarries on the Cost-book Principle. Now, it is notorious, that the Stannary Court has no jurisdiction whatever over such companies; and it would necessarily follow, that if all companies on the Cost-book System, which do not come within the jurisdiction of the Stannary Court, are illegal, then those companies for working quarries are illegal. The argument, therefore, is totally inconsistent with this part of the exception, which expressly recognises such companies as existing and legal bodies.

You admit that the authority of the registrar of Joint-Stock Companies is against you; but, high as his authority is, there is a much higher to the same effect,—that of the Court of Chancery itself, which has expressly recognised the legality of these companies in more cases than one. The Kilbricken case is notorious. That was a company formed in this country for working a mine in Ireland on the Cost-book System, and it has been wound up in the Court of Chancery, which could not have been done unless it had come within the exception of the Act. The company was not registered under the Act; and if it did not come within the exception, it was an illegal association, and could not be recognised as a company in any court.—J. N.: London, Oct. 1.

#### REGISTRATION OF JOINT-STOCK COMPANIES.

SIR,—As a statement appeared in one of your Journals that companies in the colonies were not liable to registration, I beg to say that, on inquiry at the Registrar-General's office, I was assured by a gentleman, that all joint-stock companies, whether in the Australian or other colonies, were liable to a penalty, if not registered in the same way as other companies in the United Kingdom. Oct. 3.

#### MINING IN BRECKNOCK, SOUTH WALES.

SIR,—Being a constant reader of your valuable Journal, I have frequently observed therein various paragraphs on the appearances and prospects of the Nant-y-Car and Dalriw Copper and Lead Mines, situated in what I believe to be a newly-discovered mining district in the county of Brecknock, in South Wales. I had also oftentimes heard the veracity of those paragraphs impeached in London and elsewhere; and although the mineral samples from these mines were open for inspection at the company's offices, in the Old Jewry, the fact of their being the products of the above was flatly denied. In my perambulations through the mining districts of Wales, I arrived last week in Cardiganshire, and found that on my way to Swansea I should not be far distant from the mines alluded to; and, being an old miner, I thought I would spare a day to see them, in order to judge for myself of their value, or, as I have been told, their total worthlessness.

I arrived by mail at a place called Rhydyar, and inquired for the locality of the mines, or any person connected with them, when the landlord of the hotel at that place kindly referred me to a Mr. Roberts, whom I found exceedingly intelligent and obliging, and who not only permitted me to visit the mines, but kindly conveyed me there. Now, Mr. Editor, my object in troubling you with this is that through you the public mind, and the minds of the adventurers in these mines, may be disabused. I inspected both mines carefully, and at once became satisfied the samples shown in London were their produce.

I went down the engine-shaft, the deepest part of the mine being only 40 fms., which in Cornwall would be considered shallow, from which an adit level is driven north on the course of the lode, 4 ft. wide, to the extent of 4 fathoms or thereabouts—the lode being some 8 or 9 ft. thick, fully impregnated with copper ore of the finest quality, capable of producing 4½ tons to the fathom, the cost for working the same up to bank being 7½ per fm.; the ore producing, by assay of Messrs. Johnson and Co., of Hatton-garden, 33½ per cent. of pure copper, holding out promise of an immense profit.

I have not seen one mine in twenty, in the county of Cornwall, with half the prospects that are presented in these mines. The Dalriw Mine is a virgin one. On the south of the same lode, about a mile distant, in which an adit level has been driven for 50 fms. on a fine course of copper ore, from 4 to 6 and 8 in. thick, solid in most places, an engine-shaft is now being sunk, and a large water-wheel erected, which will be sufficient for all purposes. This mine, I have no doubt, will be an early dividend-paying mine; and from the judicious manner the company have commenced their operations, they will very soon realise their most sanguine expectations.—J. L. DAVY: Gloucester, Oct. 2.

#### IS MINING A LOTTERY?

SIR,—In your Journal of the 16th August Mr. M. Francis gives a list of eight mines in Cardiganshire, under the management of himself and brothers, with a view to show the public that if mining be a lottery, as is generally supposed, yet by the employment of judicious and experienced agents there is little or no difficulty in selecting the prizes from the blanks. The shareholders in these mines, however, are not quite so satisfied with the result as the Messrs. Francis seem to be, for they, poor simple souls, form their judgment on the amount of dividends received, and not from the reports of mining capitalists and others interested; from this, the only true test, behold the result:—Allt-y-Crib, 6240z.; Bronfloyd, 2000z.; Bwlch Consols, 8000z.; Cae-Gynon, 1000z.; Cwm Daren, 1000z.; Daren, 2000z.; 20,240z., besides Grogwinion and Penrhil, which are not in the official list; but the other six show a capital of more than 20,000z., the only dividend on which, for the last nine months, has been the mighty sum of 150z., or 2s. 6d. per share, to the fortunate adventurers in the Allt-y-Crib Mine; and yet these mines have been selected by Mr. Francis to prove to the disbelieving world that mining, under judicious management, is no longer a lottery.—ONE INTERESTED: Hightate, Sept. 29.

#### DEVON AND CORNWALL SMELTING COMPANY.

SIR,—It is with great satisfaction that I have read the prospectus of this projected company; and I am only surprised that so praiseworthy a step has not been taken long before.

In Freyberg and the Hartz Mountains, from time immemorial, with more or less success, they have extracted all the several metals which might form the component parts of any vein, while this has been universally neglected wherever British capital has been employed; our miners and smelters, though acknowledged to be most practical, possess but very little theory, and are totally wanting in that chemical knowledge and education which every German miner in some degree possesses. I by no means wish here to enhance the one at the cost of the other; both have their merits and demerits; and much money has been improperly and wastefully expended on the continent by a too great attention being paid to fixed principles and conventional technicalities. It may not be out of place here to express a hope that the Government School of Mines, established under the auspices of the Museum of Economic Geology, will in their lectures and practical instruction eschew the errors which from time and a hatred of reform have crept into the continental schools: the education offered by them, we must opine, will be of a superior order to these, the sum charged being about five times as much, and scarcely within the reach of the practical man.

From the prospectus issued by the Devon and Cornwall Smelting Company, it appears that they intend purchasing the poorer copper ores for the purpose of extracting the copper and the other chemical products, which they propose to render available by a process entitled "Todd's Patent," the efficacy of this, it appears, has been tested and approved by Dr. Ure and Mr. Phillips, than whom no persons are more capable of judging. I know not if it has been successfully carried out on a large scale; if so, there can be no doubt of its success, provided the estimates be correct, which, from the low figure they appear to be calculated at I have no reason to doubt; if, however, the patent is merely experimental, or merely deduced from laboratory practice, I am sure you will agree with me that a great amount of caution should be exercised. Within the last few years, scarcely a month has passed but we have read in the *Mining Journal* of new patents for copper smelting, improvements in furnaces, &c.; but how few of them have proved to be of any practical effect, or adopted by the smelter: in fact, from my own personal testimony, I could certify that more than one-half were worse than useless, and though possible of producing a result in a crucible, entirely futile in a furnace. This, I presume, is not to be apprehended in the present instance, and the experiment, in all probability, has been tried in its details before it was ushered into public notice; it seems curious, however, that the directors should confine their operations to the purchase of poor ores, and the reduction of their copper into regulus. If profitable to purchase poor ores, surely it would be more so where they to obtain the richer.

Every practical smelter knows that when the regulus is made, the conversion through the other stages to cake copper is comparatively easy, the first process being the most difficult, the greatest profit being always derived from the ulterior processes; foreign regulus the Swansea smelters have been long in the practice of purchasing as copper ore, ignoring its first reduction: you will be at no loss to guess the cause, when I write the ominous words—*returning charges*. A poor regulus of 4 per cent. would be easily reduced and profitably with richer ores, and I think it would be better in the coffers of the Devon and

Cornwall companies than swelling those of the plethoric body at Swansea. The intention may be further to develop the undertaking as they progress: Cambrian opposition, assisted by Cornubian influence, has before crushed any attempt at an amelioration of the despotic edicts which govern the relations of smelter and miner. It may be wise, in the first instance, not to promise too much, or provoke a combined enmity. The present step is an advance in the right direction, and as such deserves all encouragement and support.

London, Oct. 1.

GERMANICUS.

#### CAE-GYNON MINE, CARDIGANSHIRE.

SIR,—Seeing a letter from a person who styles himself "Fair Play" in your Journal of last week, recommending the shareholders to come and see this mine for themselves, I beg to inform "Fair Play" that all the shareholders have seen it, and are perfectly satisfied with the prospects of the mine, so that there is not the least hope of his friendly advice being attended to—the only parties holding an interest being my brother and myself. As the estimated quantity of ore broken and lying on the bank is a matter that will now soon be proved, the rainy season having arrived, I shall let the facts speak for themselves; but I would remark that my estimate of the ore now on the mine is rather more than double that of "Fair Play's," and that nearly all of it has been procured from sinking an engine shaft under the deep adit, and a winze under the shallow adit, and that many thousands of pounds worth of ore is now laid open, which can be worked away so as to leave us good profits. As this however is a matter that cannot interest the public, I shall let the subject drop, and advise "Fair Play" in future to endeavour to devote his time to some advantage to himself, instead of prying into the private affairs of others. If he adopts this course, he will find it quite as profitable as the one he has taken in hand, and it may prevent him from exposing his ignorance to a greater extent than he has already done.—ABRAHAM FRANCIS: Goginan, Oct. 1.

#### ON Mr. MURCHISON'S PRIZES—WHEAL CREBOR.

SIR,—It must be very gratifying to the readers of your valuable Journal to see that Mr. Murchison is about to offer prizes for the working miners of Wheal Crebor to compete for, and I can bear testimony to its being one of the best things ever adopted for improving that class of men. It calls their energetic powers into action, it arouses them from their slumbering habits, and causes them to be thinking men. When in the bowels of the earth, they will hourly watch the beautiful working laws of Nature, and bring out more scientific information in the next century than has ever been discovered since the days of Tubal Cain. I threw out a hint on the subject above 12 months since, and beg again to repeat as to its good effect. Most men in the counties of Devon and Cornwall know Mr. Avery, of Boscastle, to be a shrewd and business-like man, qualities he brings out in all his transactions. He once called on me to give him plan and estimate for carrying out his extensive quarries for seven years, when he at once offered prizes, free to all England, for the best plan of doing it for the same period, allowing them three months for its production, which placed me in rather an awkward situation, from my not being aware of his intention to throw it open to the public; and when the day came there was a rare collection of mine agents, quarry agents, engineers, captains of vessels, and schoolmasters, and men of every business, and every one competing had to explain his plan. Notwithstanding all this, I was fortunate enough to carry off the prize the first and second year, when I had no more competition. The prizes were still annually offered; I was then called out and made judge as to the merits of those competing. Most men must see that at the commencement I was placed in rather an awkward position, but I am free to confess that it was the best schooling I was ever taught, and shall never have to regret it. Was this plan generally adopted by every company bringing out new mines, or connected with old ones, and they offered a prize of 50z. for the best plan and estimate for carrying out the same, do you think we should then have all the same men for agents who now fill that office? I think not; the men of real merit would come in, and three-fourths of the much-talked-of captains' sons, brothers, and cousins, would have to return to the pick and gad—a grade they never ought to have emerged from. Companies adopting this plan would often save from 20 to 50 per cent. on the first outlay, and science would work its way in through every branch. The most able captain would have to keep a good look out and see his way clear, otherwise he would run on the shoals or get capsized. It would also bring on legitimate mining; parties engaged would then have disinterested men's plans and estimates laid before them, which would show the actual sum required to carry out the work. This would hold the managers in check; they would have to accomplish the work for the money estimated, or walk off. Men who get inebriated would not stand long under this system, and I would ask if the best conducted mine in the two counties would not be improved under it. Every captain would then be a man of merit, gradually combining science with his works, and each one trying to outvie his neighbour. In this case they would soon become a thinking useful class of men, combining practice with science; when the sluggard, the theorist, and the puffing captain, would be driven from the field. In conclusion, I beg to say that every man wishing to carry out legitimate mining should support Mr. Murchison's valuable plan.—N. ENNOR: Wiveliscombe, Sept. 30.

#### ON LEGITIMATE MINING AND WHEAL TONKIN.

SIR,—Seeing of late so many letters in your Journal, complaining of the trickery used in puffing off mine grants, obtained only to suit party purposes, who never once contemplated on the return of a shilling to the pocket of the deluded shareholder, their only aim from the commencement being to finger the cash, I am glad to see you and "A Cornishman" come forth, not forgetting my old friend "Argus," and many others, putting their shoulders so nobly to the wheel, and endeavouring to check their progress. Who can look at "Argus's" useful remarks on the few paying mines, and not discover that all is not going right; and what is not going right is most certainly going wrong, and most eventually bad? Then I ask, who suffers from it? Is it not the honest adventurer, captain, and labourer, neither of whom ever profited a shilling by the tin grabbed by these land sharks; and how often have their children wanted bread from the acts of these men, who rob the noble-minded adventurer, discharge the honest captain as not suiting their purpose, and, in the end, defraud the hard-working labourer by absconding or disowning the mine? Under these circumstances, I say it is time for those who support legitimate mining to combine, and hold these adventurers in check. I am glad to see so many ready to come forward in heart, though I pity their situation. They dare not give their names; they have their bread to earn, and it is too often in some mine their persons have a hand in. They would be marked men on Saturday night, and would have to take up their kit and walk, when their little offsprings would suffer. To avoid this, they struggle on like men gagged; we do not get from three-fourths of them what they would say—it is what they must say. I am well aware that there is no free trade yet thrown open to the mine capitalists; but it must come; the present system cannot make head long. Their frail bark is getting weather-beaten, and every eye is on them; they are known to be pirates, and will be treated as such.

Turning to Wheal Tonkin, I would first tell the "Adventurer" that, from the position I stand in, I am not dependent on him. I am ungagged; and, in reply, I beg to inform him, after firing the first shot, that his insinuations are nothing more than I expected. I am prepared for the battle, as I well know my opponents would not face me in the open field; they dare not; they lurk behind the hedge. He knew I should ask how many dividend-paying mines he was ever concerned in, and how many Wheal Tonkins he had before brought out? Has he not lived for the last 20 years on Wheal Tonkins? For dividend-paying mines, I would refer him to your last year's list, to point out to me one, from the Tamar to the Caradon Mines. He now asks what I think of Hingston Down Consols. I tell him I never condemned it, but he will remember that one swallow on Hingston Down will not make a summer; and I shall think much more of it when I find it has paid back all the golden feathers it has plucked from the adventurers' pockets, and I wish it may do it. With regard to the rattling of slate, I admire them from their being so useful. Were he to call on me, he would find a great many used to criticise his reports and proceedings, as also those of many other puffers, who have of late so ably managed to finger the cash, which will all come out some day. To conclude, I beg to tell him that I am the same person who managed Treburget—the only mine to the east of Wheal Rose, on the north of Cornwall, that ever paid a dividend worthy of notice, for which the company annually made me a handsome present, and never did, neither will they, charge me with fraud, or one disreputable act. On my leaving them, the chairman handed me such testimonials as "An Adventurer" never could produce. It is these things that enable me to show my name before the public.

Turning next to Mr. Rippon, I beg to give him a lesson on my practicability, by telling him that I learnt mining before he made his debut in the field, by working in nearly every mine in his district, and most of the mines in the west of Devon, besides a great number of engine-shafts, and many mines in the west of Cornwall, and have inspected 30 times as many mines as he ever worked in. With regard to my queries on the direction of a lode, I am aware that more than one of his colleagues were very much annoyed at not being able to answer a few plain and simple questions, which every practical miner should know before attempting to put on the duck jacket.

With regard to Wheal Tonkin, I have only to remark that the men were at work, and the water out, when I called, but no ore could be shown. The stuff drawn up was quite sufficient to satisfy me; I had seen enough of this lode in early days. I never stated that stones of black ore may not be broken from this lode, but it is not every miner who knows black ore when he sees it, and particularly so from this lode; I have seen the best miner of the day deceived by the same lode. So much for men of sound judgment. But to place Wheal Tonkin on a sound basis, I would ask him to allow me to name three respectable agents of his own parish, allowing him to make choice of either, and for what I know, they may be his own relations, and let that report come before the public, to stand the test against mine: as a matter of course, the company should pay the man selected.

I would next repeat a very interesting piece of information which I received in my last Cornish survey, when I happened to fall in with a man who formerly worked in my employ, whom I had not seen for many years. I know the man to be far above the common grade of working miners, and far rather surprised to find him still in that class. On asking him the reason, he told me that he could have had a situation, a short time since, not 100 miles from Wheal Tonkin; but on meeting a leading shareholder, he asked him if he must tell "lies." The answer was, that he must say and sign what would do, when he said he would not accept the situation. Should Capt. Rippon be a young beginner, and have accepted such a situation, my advice to him would be to retire, lest he may earn the distinguished name of Capt. Puff, which might cause him to be noticed, and used in case of need by every adventurer.—N. ENNOR: Wiveliscombe, Sept. 30.

#### WHEAL TONKIN.

SIR,—The letter of Mr. N. Ennor, in the *Mining Journal* of the 20th Sept., I expect to be one of his usual unfounded effusions, unasked for either by a shareholder

or anyone else, for it certainly is no answer to the enquiry in your Notice to Correspondents in the previous Journal. I once had some opinion of Mr. Ennor's qualifications, as well as of his integrity, but on this occasion he either exposes his ignorance or does not state the whole facts of the case as they have come to his knowledge. Mr. Ennor says he has known the district 40 years, and that Wheal Tonkin was formerly a portion of Old Wheal Duchy; that he found a few pits, and two shafts sunk to water level, but does not know what they are looking for, tin, copper, or silver. Now, Sir, I have known the Calstock and Callington districts nearly 40 years, and I believe no portion of Tonkin formed part of the Duchy Mine. The way in which he speaks of a few pits and two shafts shows that he could not have looked at the mine at all; but, if he will call here when I am present I will have the water forked, go down with him into the workings, and break from the lode before his eyes in good stone of yellow minepepper ore as he ever saw from any lode in Cornwall. Mr. Ennor appears to me to be one of those who have just skimmed the surface of mining knowledge, one to whom "a little learning is a dangerous thing," and proud of his supposed attainments, is thrusting himself and his pen into everybody's business, for which he repeatedly gets a rap of the knuckles, and his ignorance exposed. I could say much more, but as your two correspondents—"A Tonkin Adventurer," and L. Rippon, fully explained the whole in your Journal last week, I wish not further to occupy your valuable space. J. SEYMOUR. Liskeard, Sept. 30.

[ADVERTISEMENT.]

#### TREBURGET UNITED MINES.

SIR,—Anonymous attacks are best treated with "silent contempt;" but there are some erroneous statements contained in the advertisement in your Journal affecting this mine, which I feel it my duty, representing the adventurers, to correct. Your correspondent tells you that 1z. per 512th share was paid to me as working capital on the 11th Sept., 1850. Such is not the fact; that call has been paid to me on 298 shares only, and the greater part of it long since that period. The next paragraph is wholly false; but as it refers to contemplated legal proceedings, perhaps that course would be the shortest mode of disproving its assertions.

The samples referred to were furnished to me in the store by the pitmen as the produce of the lodes in the north west of yellow minepepper ore as he ever saw from any lode in Cornwall. Mr. Ennor appears to me to be one of those who have just skimmed the surface of mining knowledge, one to whom "a little learning is a dangerous thing," and proud of his supposed attainments, is thrusting himself and his pen into everybody's business, for which he repeatedly gets a rap of the knuckles, and his ignorance exposed. I could say much more, but as your two correspondents—"A Tonkin Adventurer," and L. Rippon, fully explained the whole in your Journal last week, I wish not further to occupy your valuable space. J. SEYMOUR. Liskeard, Sept. 30.

In consequence of the writer of your advertisement (if I am right in detecting his identity) having failed to pay his call within due time, I have, agreeably to the rules of the mine, declared his shares forfeited. He has been informed of this, and hence the refusal to him to inspect the books as an adventurer; but he has been told that any adventurer may so inspect them at any time. I again repeat that the meeting of the 30th August last was not a legal meeting. The notice calling it is signed only by Messrs. Bennett and Hooper, who hold only six shares; and there is no statement that they so signed as proxies for others, nor any information by which the other adventurers or myself could possibly know that the notice of meeting was legal.

The writer next alludes to some balance-sheet, as if I had delivered such at the meeting of the 30th August. The only balance-sheet was that I delivered at the meeting of the 31st May, which included the accounts to the end of April. In the month of August being asked what was then the state of the accounts, I calculated the further costs to the suspension of the mine to be about 76z. 7s. 11d., but as these costs had not been audited by the adventurers, it was necessary to qualify the accounts by the word objected to by your correspondent. For the propriety of the work done, or the price paid for it, the agent of the mines, and not the pursuer, is responsible. In this case, I am confident no charge can be brought against him of extravagant or unnecessary expenditure. The observations, personal to myself, of your anonymous correspondent require no reply; but if I am correct in my conjecture, the writer is one whose unfortunate temper has hitherto driven him from every situation, whose interest in this case, giving credit to his account of the treatment he had received from former parties, I regret to say, I supported against the feelings of almost all connected with the mines; who is thus open to the charge of deep ingratitude, who misled myself and friends in the outset to pay a premium for the mines by the strongest assertions of our finding there what we have since proved to have existed only in his imagination; to whom we paid a salary for doing nothing, until we were convinced how grossly he had deceived us, and whose only object in getting up the pretended meeting of the 30th August is now proved to be the continuance of that salary, by his demanding from me its payment to the present time, in direct opposition to the unanimous resolution, suspending all salaries, of the meeting of the 31st May last, which he himself attended, and which he would now, for his own purposes, wish to call "illegal." In conclusion, I shall take no notice of any further attacks from the same quarter, regretting, as I do, to have already occupied your valuable columns with so much matter of so little importance to your general readers.—GEORGE NICOLLS SIMMONS, Purser: Truro, Sept. 24.

#### BLAKE AND PARKIN, MEADOW WORKS, SHEFFIELD.

MANUFACTURERS OF CIRCULAR AND MILL SAWS, Improved CAST-STEEL FILES, for the use of Engineers and Machinists, Patent tempered MACHINE KNIVES and CUTTERS, manufactured for planing and grooving wood, for cutting paper, iron, stone, leather, &c., made to any pattern or dimensions with the utmost exactness. Warranted to work with a harder and finer edge than any other mode of temper.

Inventors of corrugated cast-steel for taps, piston-rods, &c. Manufacturers of railway springs, blaster, shear, and cast-steel, &c. &c.

•• Samples at the Great Exhibition, Class XXII., No. 193.

#### IMPROVED LIFTING JACKS.

MANUFACTURED BY W. AND J. GALLOWAY, PATENT RIVET WORKS, MANCHESTER.

The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.



#### IMPORTANT SAVING IN MINING OPERATIONS. GUTTA PERCHA HOGAR PIPES, AND SPEAKING TUBES IN MINES.

The GUTTA PERCHA COMPANY have been favoured with the following important Letter from EBENEZER ROGERS, Esq., C.E., F.G.S., Abercarn Fach, near Newport, Monmouthshire:—

March 21.—In reply to your inquiry as to the use of gutta percha as a material for the Hogar pipe used for taking up water in sinking shafts for mines, I have pleasure in stating that my application of it for this purpose is perfectly successful.

The ordinary slide pipe is entirely superseded by the gutta percha Hogar pipe, and it will be evident to every person experienced in mining, that the flexibility and lightness of the latter admits of sampling in any part of the pit, without the great amount of labour attendant on that operation with iron pipes.

The freedom from liability to accidents in blasting, and the great facility with which repairs can be effected in case of damage, cannot fail to recommend your material to the notice of every person engaged in mining operations.

The gutta percha Hogar pipe, which we have now in work at the Abercarn Collieries, is about 20 feet in length, and after very severe trials in sinking through hard rocks, where the expensive slide and stock would be always liable to breakage, the gutta percha is little worse for wear. I am also glad to state that the 400 feet of speaking tube for communicating between the top and bottom of the shaft answers admirably, and is a great economical mode of time. EBENEZER ROGERS.

#### GUTTA PERCHA PUMP BUCKETS.

COPY OF LETTER FROM MR. C. THOMAS, DOLCOATH MINE, CAMBORNE. Camborne, Jan. 27.—Three gutta percha 12-inch pit boxes, or pump buckets, drawing water 7½ feet stroke, have been used and worn out in this mine, and I beg to inform you that they have lasted on an average six weeks each, giving double the average wear of leather boxes, or buckets. This alone is important in saving time and cost of changing boxes, especially in long lifts, and gutta percha requiring no nails for gearing, the working pieces will doubtless last much longer. On the whole, we much prefer gutta percha to leather for boxes. CHARLES THOMAS.

#### SYPHONS FOR MINES.

FROM MR. A. CROSFIELD, TY MAUR COLLIERY, NEAR PONTY-PRIDD. The gutta percha pipe sent me for the purpose of employing it as a syphon for drawing water from a damp heading at these works, answers admirably; and, although the pipe is so small, it is surprising the quantity of water passing through it. I consider that gutta percha piping may be applied in mines and collieries to very valuable purposes, and is especially adapted to be used on the syphon principle, where local circumstances will admit of such application.

#### MINERS' CAPS.

Northumberland Miner's Cap. Cornish Miner's Cap.

The GUTTA PERCHA CAPS are not only Waterproof, but afford peculiar protection to the wearer from the Falling of Loose Stones, &c. &c. &c.

EVERY VARIETY OF GUTTA PERCHA ARTICLES SUITABLE FOR MINES—viz. Hogar Pipes, Pump Buckets, Cloaks, Speaking Tubes, Engine Packings, Syphons, Miners' Caps, Waterproof Suits, &c.

MANUFACTURED BY THE GUTTA PERCHA COMPANY, PATENTERS, No. 18, WHARF-ROAD, OTT-FROAD, LONDON.

•• Specimens may be seen on application to the Company's Dealers.

•• Specimens may be seen on application to the Company's Dealers.



## Mining Correspondence.

In a most congenial ground for mineral, composed of killas, spar, and mundic—there is every indication of this shortly proving a good mine. Our new engine works in a most satisfactory manner.



**WHEAL TREWANE (SILVER-LEAD).**—This mine is situated in the parish of St. Kew. The sett is extensive, and the main lode passes through the property for a part of 500 ft. in length; it is quite compact and regular. To the south of the lode the surface has been sunk to 15 fms. in its course; the lode is opened on the 10, 20, 30, and 40 ft. level, and a quantity of rich silver-lead ore raised. In the bottom of the 30 ft. level the lode is very productive, being about 15 inches wide, carrying a solid water of lead ore on the foot-wall 4 inches in width, the remaining part of the lode being very dry throughout. This part of the mine has been considered to be by many practical mining agents a *bona fide* adventure. To the south of the engine-shaft 70 fms. a shaft has been sunk on the lode 13 fms. below the surface. In this part the lode has greatly improved in size, it being full 2 ft. wide in the shaft, composed of quartz, carbonate of lime, spathose iron, and rich silver-lead ore, producing about 15 cwts. of lead



per fm., with every prospect of improving in depth; the lode carries on the back a strong gossan, impregnated with lead ore; this gossan holds down to a pretty good depth, and below it the lode makes rich in a soft spar, sphatose iron, &c. To the west of the diagonal shaft a perpendicular shaft was sunk to the depth of 15 fathoms below the surface, with a view of cutting the main lode at the depth of 70 fms. About 8 fms. south of the diagonal shaft a shod pit has been sunk 14 ft. deep, and a level driven on the lode; about 6 fms. in this level the lode is larger and looks very promising, mixed up with gossan, quartz, and lead ore; in this level the prospects are indeed very encouraging. On the west side of the valley a lode, full 3 ft. wide, carrying a beautiful gossan on the back, with lead ore in it, was discovered; a perpendicular shaft was sunk 8 fms., and a cross-cut driven towards the lode; some branches, containing lead ore, were met with, but in my opinion this level was not extended far enough west to reach the main part of the lode; however, this remains to be proved, and I do not but that at some future day this lode will be fairly developed. I should recommend sinking on the diagonal shaft to a 20, 30, and 40 fathom level, and extending levels north under the old mine, and south to the great cross-course; by so doing an immense quantity of grey ground would be laid open, and the mine brought into a thoroughly good working condition. I should also strongly recommend the erection of a steam-engine, of not less than 50-horse power, to be fixed near the diagonal shaft; and I am confident that, with the aid of such necessary machinery, this mine would soon be brought into a paying state—in fact, the prospects at present warrant a sufficient outlay of capital to bring the mine into a complete state of working. The buildings consist of a good roomy smithy, carpenter's shop, counting-house, material-house, &c. There are on the mine a steam-engine of 12-horse power, crushing-mill, stamps, and four water-wheels of different sizes. Looking at the generally superior quality of strata, particularly on the east side of the valley, the bold character of the lodes, and the great cross-course to the south, I feel no hesitation in expressing a decided opinion that, with careful management, combined with economy, Wheal Trawane will become a great and a profitable mine.—P.S. There is a good heap of lead ore lying on the ore floors, and about 2 tons in course of washing.

**WHEAL WREY CONSOLE.**—The prospects here are of the most cheering character. No doubt but the adventurers will, with a small outlay, reap an abundant harvest. The lode in the end is looking better than ever I saw it before, being now composed of flookan, pryan, peach, fluor-spar, and barytes, with large lumps of rich silver, mundle, and strings of lead ore. I am opinion, as we get under the hill we shall find this lode rich,—at all events, when we reach the junction of this, with the great lode cut in costaining, we may reasonably expect a rich deposit of ore: I intend to have the lode stuff assayed for silver.

**WHEAL WILLIAMS.**—The ground in the south lode engine-shaft is still hard, consequently our progress is slow. We have cleared the shaft, and have access to the 30 fm. level, in which the lode is from 4 to 5 ft. wide, composed of capel, spar, mandle, pryan, and ore, altogether very promising.

#### FOREIGN MINES.

**LINARES MINES.**—The following has been received from Mr. H. Thomas: *Linares, Sept. 20.*—The lode in the 55 fm. level, driving west of Wilson's shaft, is not so good as we have had it for the past fortnight, being hard, and worth for lead 14 tons in a fm. The lode in the 45 fm. level, east of Shaw's shaft, is improved, being worth 3 tons in a fm., and opening ground that will set at a moderate tribute; the lode in the same level, driving west of San Juan shaft, is in fair ground, but entirely without ore. The progress in clearing the 31 fm. level, east of Shaw's shaft, is at present slow, from the necessity of cutting down some ground lost by the old men, in which there is a branch of lead worth about 1 ton in a fm. In the old workings in advance of this, which we have been lately clearing for the purpose of putting a shaft down for drawing and ventilation, and to open up the eastern part of the mine, the men have mined a depth of 22 fms., the old workings still continuing. In one or two small arches led the lode is worth 2 tons of lead in a fm., and there is no doubt the "ancients" found a productive lode for a great length in this direction. Our tribute pitches are turning out fairly, and without any change particularly to notice. In the engine, San Juan, and Shaw's shafts everything is proceeding regularly, and the work advancing.

**Stock Account.**—Lead ore, weighed in to Sept. 20th, 43 tons 6 cwt.; total in stock, 270 tons. Pig-lead smelted for week ending Sept. 20, 25 tons; total in stock, 396 tons.

**ROYAL SANTIAGO MINING ASSOCIATION.**—I forwarded a few days since duplicates of the 16th inst. for a vessel about to sail for Jamaica, with the cost-accounts for July. I expect this may be in time to go by the same opportunity. It occupied us until yesterday to effect a communication of the 23 fathom level with Taylor's shaft, where it has been effected at 3 fms. above the 22. The shaft is 16 ft. south of the level; no flookan has been met with, and the water still remains as before, from which we conclude, although the south cross-cut has been driven 3 fathoms 1 ft. (which will nearly make up the underlay), the lode from which the ore has latterly been raised is still unintersected; the cross-cut south has, therefore, been resumed. In driving the 22 fathom level in all the distance from Perseverance shaft we had always a regular north wall, until we passed the level referred to in my letter of the 28th of June. In the bottoms, west of Taylor's, we went down to water, which interferes with the raising; the lode yields some good stones of ore, but the dust is very foul with mundle, and requires a great deal of labour to clean it.

#### THE BURRA BURRA MINES, SOUTH AUSTRALIA.

We have just received a full account of the annual general meeting of the shareholders in the South Australian Mining Association, held at the offices, Rundle-street, Adelaide, on the 16th April last.—W. PEACOCK, Esq., in the chair,—from which it appears that the operations during that period on this extraordinary mine have been attended with a success unparalleled in the history of the company. From the directors report it appears that the copper ore raised in six months, to 31st March last, was nearly 13,000 tons, with an average produce of 21 per cent., equal to 2723 tons of fine copper, or within about 200 tons of the whole produce of Cornwall and Devon for the past quarter. The net profits of the company for the half-year ending March, 1850, to which date the accounts were finally made up, were, including rents and fees, 55,448l. 12s. 4d., equal to 6l. 18s. 10d. per ton profit on the ore produced; the cost of production being 9l. 8s. 5d. per ton, thus yielding a larger aggregate profit than during any former period, and after paying two dividends of 20l. per share, 200 per cent. (49,280l.), their remained a balance of undivided profit of 61,682l. 12s. 4d. The rents for land and buildings amount to 500l. for the half-year, and the fees to 42l. 9s. 6d. On the statement of assets and liabilities, the balance of former over the latter appears to be 128,605l. 16s. 7d., the assets amounting to 304,518l. 7s. 1d., of which amount 215,513l. was for copper and copper ore in hand, and delivered to the Patent Copper Smelting Company. No better evidence of the companies' prosperity can be given than that after paying 98,560l., in four dividends, of 200 per cent. each, upwards of 17,000l. in mineral and other landed properties, about 13,000l. in buildings, 5000l. in machinery, and a considerable addition to the stores, the divisible profit on the 31st March last was within 3000l. of that shown on 31st March, 1850. The progress of the mine as regards exploration had been much impeded by water, but larger lifts were being fixed, which, with an 80-inch cylinder engine, daily expected from England, it was expected would overcome every difficulty.

From Capt. Roach's report, the riches of this mine appear inexhaustible; at Kingston's 30 fm. level north, a discovery had been made of a magnificent lode of malachite, 12 ft. wide, of the richest quality, and at the 40, west from Roach's shaft, they had driven through a lode 48 ft. wide, producing ore from 45 to 50 per cent., from which any quantity can be raised. A large extent of tribute ground was opened, which would let at a low tribute, and the pitches generally were looking favourable, and turning out large quantities of ore. Kingston's new shaft was down 15 fms., and full of ore—the limits of the lode unknown, as they had not seen the walls. The establishment had increased during the half-year; there were 269 tributaries and 116 outworkmen, which, with 41 timbermen and labourers, carpenters, masons, painters, smiths, boys, &c., made a total on the establishment of 1042 persons. The balance of ore in stock, 30th Sept., 1850, was 6470 tons 17 cwt. 3 qrs. 20 lbs., and there were raised in six months, to March 31, 12,966 tons 1 cwt. 3 qrs. 21 lbs., making a total of 19,436 tons 19 cwt. 3 qrs. 13 lbs., of which 257 tons were exported, 1384 tons sold in the province, and delivered to the Patent Copper Company 10,038 tons, leaving on hand at the mines 7758 tons. The copper account showed—on hand, September 30, 1850, 137 tons 3 cwt. 1 qr. 24 lbs.: received from Patent Copper Company, 839 tons 13 cwt. 2 qrs. 8 lbs.—976 tons 17 cwt. 0 qrs. 4 lbs. Of this amount 530 tons were exported for sale, 303 tons sold in the province, leaving on hand 144 tons 12 cwt. 3 qrs. 1 lb. There is every reason to expect that the next accounts will prove still more satisfactory. A larger quantity would have been raised during the half-year ended March the 31st, but for the influx of water; the erection of a powerful engine, however, will remove this difficulty, and leave full scope for working their splendid lodes to an extent hitherto scarcely imagined. Messrs. Allen, Peacock, Paxton, Featherstonhaugh, and Sanders, were re-elected directors, and Mr. C. S. Penny had resigned. The thanks of the meeting were voted to Capt. Roach, and the other officers of the mine.

Captain James Polglase, who has just returned to England from managing the Bruce Mine, Lake Superior, was presented, previous to his departure, with a handsome gold watch, as a mark of the esteem and regard entertained towards him by those employed on the property.

#### MINING APPOINTMENTS FOR THE WEEK.

1. Pay at Devon Consols, Par Consols, Holmbush, Perran St. George, Polberro, West Jewel, Dolcoath, Stray Park, and Trannack and Bosence.
2. Tamar Silver-lead Mining Company meeting, in London.
3. Wheal Bassett account, on the mine.
4. Trevelick Consols annual meeting, and Union Tin Smelting Company meeting, in London. Devon Consols and other samplings.
5. Wheal Arthur meeting, in London. Ticketing at Reith—Carn Brea and other 16. Stray Park account, on the mine; North Pool meeting; West Caradon and Gome-mena pay.
11. Pay at Alfred Consols, West Treasury, East Crofty, Phoenix, United Mines, and Wheal Adams.

#### Current Prices of Metals, Stocks, & Shares.

METAL MARKET, London, October 3, 1851.

| ENGLISH IRON.                      |         | per ton.  | Tile                     |          | £88 0 0   |
|------------------------------------|---------|-----------|--------------------------|----------|-----------|
| Bar, bolt, & square, London        | 25      | 5-5 7 6   | Old copper               | per lb.  | 8 1/2     |
| Nail rods                          | 5       | 0-6 2 6   | Yellow Metal Sheathing   |          | 7 1/2     |
| Hoops                              | 7       | 0-0 7 8   | Wetterstedt's Pat. Metal |          | 1 11 0    |
| Sheets (4 feet)                    | 12      | 6-7 17 6  | FOREIGN COPPER.          |          |           |
| Bars, at Cardiff & Newport         | 4       | 7 6-4 10  | South American, in bond  |          | 77 0 57 0 |
| Refined metal, Wales               | 3       | 0-0 3 5   | ENGLISH LEAD.            |          |           |
| Do. anthracite                     | 3       | 10 0      | Pig                      | per ton  | 17 0 0    |
| Pigs in Wales                      | 3       | 0 0       | Sheet                    |          | 18 10 0   |
| Do. do. forge                      | 2       | 5 0-2 10  | Pipe                     |          | 19 0 0    |
| Do., No. 1, Clyde, net cash        | 1       | 9 6-7 10  | Red lead                 |          | 19 0 0    |
| Blowitt's Patent Refined Iron      |         |           | White ditto              |          | 24 0 0    |
| for bars, rails, &c., free on      |         |           | Patent shot              |          | 20 0 0    |
| board at Newport                   | 3       | 10 0      | FOREIGN LEAD.            |          |           |
| Do. do. for tin-plates, boiler     |         |           | Spanish, in bond         |          | 17 0 0    |
| plates, &c., ditto                 | 4       | 10 0      | ENGLISH TIN.             |          |           |
| Stirling's Patent } in Glasgow     | 2       | 15 0      | Block                    | per cwt. | 4 4 0     |
| Toughened Pigs } in Wales          | 3       | 10-15     | Bar                      |          | 4 5 0     |
| Staffordshire bars, at the works   | 5       | 5 0       | Refined                  |          | 4 10 0    |
| Rails                              | 4       | 15 0-5 10 | FOREIGN TIN &            |          |           |
| Chairs (Clyde)                     | 4       | 0 0       | Banca, H. C.             |          | 4 0 0     |
| FOREIGN IRON.                      |         |           | Straits                  |          | 3 19 0    |
| Swedish                            | 11      | 10 0      | TIN-PLATES.              |          |           |
| CCND                               | 17      | 10 0      | IC Coke                  | per box  | 1 4 0     |
| PSI                                | —       | —         | IC Charcoal              |          | 1 8 6     |
| Gourieff                           | —       | —         | IX ditto                 |          | 1 14 6    |
| Indian Charcoal Pigs in London     | 5       | 10 0      | SPELTER.                 |          |           |
| FOREIGN STEEL.                     |         |           | Plates, warehouse        | per ton  | 14 5 0    |
| Swedish keg                        | 15      | 0 0       | Ditto, to arrive         |          | 14 5 0    |
| Ditto faggot                       | 15      | 0 0       | ZINC.                    |          |           |
| ENGLISH COPPER.                    |         |           | English sheet            | per ton  | 21 0 0    |
| Sheets, sheathing, & bolts, p. lb. | 0       | 0 9 1/2   | Quicksilver              | per lb.  | 3s 6d     |
| Tough cake                         | per ton | 84 0 0    |                          |          |           |

WELSH BAR-IRON is dull of sale. Rails are less in demand. STAFFORDSHIRE IRON is in better demand for exportation. SCOTCH PIG-IRON.—No. 1, American brands, may be quoted at 40s. 6d., free on board at Glasgow, storekeepers' warrants. No. 1, ordinary brands, storekeepers' warrants, free on board, at 39s. 3d.; and mixed numbers, free on board, makers' obligations, at 39s. SWEDISH IRON.—The holders are very firm, and favourite assortments are very scarce. SWEDISH STEEL is without alteration. CORSE CONSIGNEES in good demand. BRITISH TIN in fair request.—In FOREIGN, Banca is firm; buyers 78l. 10s., sellers 79l. TIN PLATES.—A large business is doing. SPELTER.—No transactions have been reported this week; the stock is 13,569 tons. LEAD is less required.

GLASGOW, Oct. 2.—A good business has been done in pig-iron during the week, and prices are again advancing. The shipments are also increasing, more vessels having come into the harbour, and there is a large quantity waiting for shipment. Several furnaces have been put out of blast, and more are likely to follow, as the quality of iron produced at some of the works is so inferior, that it is very difficult of sale, which occurs from the ironstone being so exhausted in the district, and inferior, brought from a distance, substituted.

| Mixed Nos., good brands, free on board here, | 39s. 6d. per ton, nett cash. |
|--|------------------------------|
| No. 1,                                       | 40s. 6d.                     |
| Mixed Nos. Gartellierie                      | 40s. 6d.                     |
| No. 1,                                       | 41s. 6d.                     |

#### EXPORTS OF METALS TO ALL INDIA FROM LONDON AND LIVERPOOL, FOR THE FIRST EIGHT MONTHS OF 1850 AND 1851.

| Metals.               | 1850. | 1851. | In. in 1851. | Dec. in 1851. |
|-----------------------|-------|-------|--------------|---------------|
| Spelter               | 2629  | 1203  | —            | 1326          |
| Copper                | 4044  | 2731  | —            | 1213          |
| Iron, British, rails  | 35927 | 21837 | —            | 14090         |
| Ditto, Foreign, rails | 891   | 182   | —            | 709           |
| Tin-plates            | 14258 | 19195 | —            | 4927          |
| Lead                  | 2020  | 3158  | —            | 1138          |
| Steel                 | 861   | 450   | —            | 371           |
| Quicksilver           | 22    | 118   | —            | 96            |

**MINES.**—In the early part of the week the market presented quite a languid character for almost every description of shares, but we are glad to report that in the last few days it has returned to a more satisfactory condition; the mines operated in being both dividend and speculative, whilst some concerns, which have lately been at high prices, show symptoms of an early approximation to their intrinsic value. The market is, however, a losing one to the majority of sellers, and is likely so to continue, in consequence of the shares having been burdened originally with premiums, which vanish when the excitement which created them is over. The only other noticeable feature of the market is that dividend mines are in the ascendant, and in many cases enquiries are made without finding sellers. The news from the mining districts is, generally, of a satisfactory character, that from Ireland particularly so.

The sale of copper ore at Thursday's Ticketing, 4367 tons, amounted to 20,700l. 11s., the average produce and standard being 7 1/2, 103l. 2s. The corresponding sale last month was 7 1/2, 102l. 2s.

#### DIVIDENDS MADE IN SEPTEMBER.

|                        | Per share. | Amount.      |
|------------------------|------------|--------------|
| Devon Great Consols    | £ 5 0 0    | £3120 0 0    |
| Wheal Buller           | 12 10 0    | 3200 0 0     |
| Carn Brea              | 2 0 0      | 2600 0 0     |
| East Wheal Rose        | 12 10 0    | 1600 0 0     |
| Alfred Consols         | 0 6 0      | 1535 0 0     |
| South Frances          | 6 0 0      | 1488 0 0     |
| Great Polgoth          | 0 2 0      | 1000 0 0     |
| Wheal Lovell           | 2 0 0      | 850 0 0      |
| North Roskear          | 6 10 0     | 840 0 0      |
| Trevelick              | 6 10 0     | 750 0 0      |
| West Caradon           | 2 10 0     | 640 0 0      |
| South Caradon          | 2 10 0     | 640 0 0      |
| United Mines (Gwennap) | 2 10 0     | 500 0 0      |
| Levant                 | 2 0 0      | 320 0 0      |
| Trehans                | 1 0 0      | 256 0 0      |
| Kirkcubrightshire      | 0 5 0      | 196 10 0     |
| Spears Consols         | 0 2 6      | 128 0 0      |
| Total dividends        |            | £21,104 10 0 |

The dividends declared in July amounted to 28,078l.; and those in August to 16,727l. 16s.—making the total for the quarter, 65,910l. 6s.

#### CALLS MADE IN SEPTEMBER.

| Mines.             | Per share. | Amount.     | Mines.           | Per share. | Amount.  |
|--------------------|------------|-------------|------------------|------------|----------|
| Great W. Alfred    | £2 0 0     | £2048 0 0   | Okel Tor         | £3 5 0     | £512 0 0 |
| Prince Albert      | 0 5 0      | 1500 0 0    | Appledore        | 0 10 0     | 512 0 0  |
| East Bassett       | 5 0 0      | 1280 0 0    | Trevelick        | 1 0 0      | 512 0 0  |
| Great Sheba        | 1 5 0      | 1280 0 0    | Tremar           | 0 10 0     | 470 0 0  |
| North Buller       | 1 0 0      | 1200 0 0    | South Trelawny   | 2 0 0      | 395 0 0  |
| Boringdon Park     | 1 0 0      | 1024 0 0    | East Ballewidden | 0 7 6      | 384 0 0  |
| East Boringdon     | 0 10 0     | 1024 0 0    | Dolwynn          | 0 0 0      | 375 0 0  |
| Tywardreath        | 2 0 0      | 1024 0 0    | Carvannal        | 0 6 2      | 325 12 0 |
| West W. Alfred     | 1 0 0      | 1024 0 0    | Wheal Caroline   | 3 0 0      | 300 0 0  |
| Clijah and Went    | 1 0 0      | 1024 0 0    | Trelyou          | 0 10 0     | 300 0 0  |
| Wheal Carpenter    | 1 0 0      | 1024 0 0    | Wheal Speedwell  | 0 5 4      | 273 14 0 |
| Sidney Godolphin   | 1 0 0      | 1024 0 0    | Modithonham      | 0 5 0      | 256 0 0  |
| Wheal Robins       | 1 0 0      | 1024 0 0    | Maraborough      | 0 10 0     | 256 0 0  |
| Bodmin W. Mary     | 1 0 0      | 1024 0 0    | South Plain Wood | 0 5 0      | 256 0 0  |
| Peter Tavy and     | 1 0 0      | 1000 0 0    | Gonamena         | 1 0 0      | 256 0 0  |
| Mary Tavy          | 1 0 0      | 1000 0 0    | Cefn Cam         | 2 0 0      | 250 0 0  |
| East Wheal Russell | 0 5 0      | 1000 0 0    | Cynamed Fawr     | 0 0 0      | 250 0 0  |
| Wheal Lemon        | 1 0 0      | 1000 0 0    | Wheal May        | 0 5 0      | 235 10 0 |
| West Towan         | 3 0 0      | 1000 0 0    | Wheal Frudence   | 0 12 6     | 160 0 0  |
| Devon & Courtenay  | 0 4 0      | 80 15 0     | Takenbury        | 1 0 0      | 128 0 0  |
| Wheal Russell      | 0 4 0      | 800 0 0     | Brilford         | 0 10 0     | 128 0 0  |
| Wheal Susan        | 0 10 0     | 750 0 0     | Cockley Beck     | 0 2 6      | 125 0 0  |
| Exgill Lead        | 0 10 0     | 640 0 0     | Wheal Sittney    | 0 10 0     | 121 0 0  |
| Wheal Comfort      | 5 0 0      | 640 0 0     | Tregordon        | 0 10 0     | 112 0 0  |
| Trelasack          | 0 10 0     | 512 0 0     | Craddock Moor    | 0 10 0     | 105 10 0 |
| Trefusis           | 1 0 0      | 512 0 0     | West Damsel      | 0 5 0      | 64 0 0   |
| West Frances       | 1 0 0      | 512 0 0     | North Trelawny   | 0 1 0      | 53 0 0   |
| Lelant Consols     | 2 0 0      | 512 0 0     |                  |            |          |
| North Robert       | 0 10 0     | 512 0 0     |                  |            |          |
| Total              |            | £38,834 8 4 |                  |            |          |

Besides a call of 1l. 10s. per share in Raleigh Mine.

The foregoing list requires some explanation. It should be taken into account that the following mines are about to, or have just set to work steam-engines for the purpose of developing the mines in depth, part of such calls being necessary to pay for the expense thereof—viz.: Great Wheal Alfred, East Bassett, Clijah, Wheal Carpenter, Boringdon Park, Tywardreath, Wheal Lemon, East Wheal Russell, Appledore, Okel Tor, Tremar, Wheal Speedwell, and Modithonham. Carvannal is erecting a steam winding-engine and sinking a new shaft. Old Brimpts and Peter Tavy are putting up new stamps. Prince Albert, Great Sheba, Devon and Courtenay, Wheal Russell, and Wheal Robins, are erecting water-wheels for pumping. West Wheal Alfred is setting up flat-roads, and getting the

mine in regular working order. Sidney Godolphin is preparing a 30-fm. plunger-lift.

We this week present our readers with the usual summary of the quarterly sales of copper, lead, and tin, the former of which may be relied on for correctness as far as the public sales by ticketing are referred to; the two latter must be considered only as near the true amount as our endeavours from every source with which we are acquainted, where information is to be obtained, enables us to furnish it. Of tin, in particular, our returns are very meagre, compared with the quantity raised. It will be observed that a considerable falling off has taken place in the sales of copper, English and foreign, as compared both with the last quarter, and the corresponding one of 1850.

In the Metal Market—Copper is steady: a large quantity has arrived from Coquimbo, but was sold prior to reaching here: several cargoes have also arrived from Russia, but not yet offered for sale.—In Lead some large sales have been made, at lower rates.—English Refined Tin is in good demand for the manufacture of Tin Plates. Bar and Block in fair request, at the quotations. Foreign suffered slightly from some parcels being pressed for immediate cash, but the market has now quite recovered. Duty was paid on 2467 cwt. during September. East India Tin has slightly declined.—In Tin Plates, owing to the manufacturers' old contracts having run out, and being anxious for fresh orders, the prices have somewhat declined, but large purchases have been made for all parts. The following is the quantity of plates shipped from L. w. pool during the following months:

| Month | Boxes  | Sept.     | Oct.   | Nov. | Dec. |
|-------|--------|-----------|--------|------|------|
| March | 39,507 | July      | 36,344 |      |      |
| April | 50,377 | August    | 36,338 |      |      |
| May   | 42,621 | September | 25,590 |      |      |
| June  | 36,596 |           |        |      |      |

The shipment to New York alone during September was 12,931 boxes.

About 100 tons of Spelter have been sold at 14l. 2s. 6d., Oct. and Nov. shipment; 500 tons at same price, prompt middle of Jan., and 575 tons on the spot, at 14l. for shipment. Small cakes, fit for the Bombay market, are scarce and wanted, and would sell at 14l. 10s. The stock on the 30th September was 13,569 tons.

The accounts from Bombay state that the business transacted in metals has been large in nearly all descriptions, with a general rise in prices, with the exception of iron hoops, faggot, steel, and South American copper, which continue at former quotations.

The London imports for the week comprise—from Hamburg, 2285 plates spelter; Adelaide, 100 tons copper ore; Antwerp, 61 casks 241 sheets zinc; Petersburg, 5605 ingots copper; Cronstadt, 2982 ingots copper, 4206 plates copper; Ceylon, 689 casks, 164 barrels, and 59 bars plumbago; Stettin, 80 tons spelter; Dantzig, 1284 plates spelter; Seville, 1290 bars 859 pigs lead, 772 qts. lead ore; Calcutta, 470 slabs tin.

At Hull—from Hamburg, 4526 plates spelter. The arrivals at Swansea include—from Havannah, 230 tons copper ore; Cuba, 550 tons ditto; Marseilles, a cargo of ditto in bulk and casks. The cargo of copper ore from Algiers consisted of 125 tons.

With the manifestation of some demand for the Indian markets, silver at length wears a more settled appearance. The amount now pressing on the market has been placed at 5s. 0 1/2 d. per ounce, and Mexican dollars are firm at 4s. 10 1/2 d. The price of silver will not be affected by the several arrivals at the various outposts by the Franklin, Tagus, and Emperor, as these supplies are almost entirely in gold. Foreign gold in coin, 3l. 17s. 5d. per ounce; ditto, in bars, 3l. 17s. 9d. per ounce.

The ticketings for 100 tons of Laxey (Isle of Man) lead ore varied from 15l. 15s. by the Tamar Smelting Co., to 18l. 3s. by Walker, Parker and Co. The ticketings for 100 tons of Newtonards (Isle of Man) lead ore varied from 7l. 14s., by Pontifex and Wood, to 10l. 1s. 6d., by Newton, and Co. Court Grange sold 20 tons of silver-lead ore, at 14l. 2s. 6d. per ton; and 6 tons, at 11l. 5s. per ton.

The Kewick Mines sold 16 tons of lead ore, at 9l. 5s. per ton.

Great Polgoth sold a parcel of tin, value 1484l. 12s.

The Black Craig Mines sold 226 tons of lead ore during the past month, 130 tons of which were raised in that time, producing 1247l. There is every prospect of increasing the returns, the mine being considerably improved, and a vast deal of ore ground laid open. We expect, therefore, the time is not far distant when we shall have the



At Bodmin Wheal Mary meeting, on the 24th September, the accounts showed a balance against the mine of 409l. 13s. 8d., to meet which, and the current expenditure required for further prosecution of the mine, a call of 1l. per share was made.

At Wheal Susan meeting, on the 19th inst., the accounts showed—Balance last account, 637l. 7s. 2d.; tutwork for March, April, May, and June, 276l. 9s. 9d.; tribute part for four months, 24l. 18s. 7d.; merchants' bills, 158l. 8s. 6d.—1097l. 4s.—By call in April, 500l.; copper ore sold, 544l. 13s.; tin, 8l. 10s. 4d.; leaves balance to next account, 534l. 0s. 8d. A call of 15s. per share was made. Three shafts have been cleared and made good to the 15 and 21 fm. levels. The 21 west shows in the back good stones of ore, and in the bottom bunches have been passed over. The back of the 15 will be taken away on tribute at 15s. in 1l.—the ore appears to dip west. In a few fathoms further driving the 21 they expect to cut a cross-course and enter the elvan channel of country, thought well of by miners of repute. The ground from the 21 to the 28 will work at from 8s. to 10s. tribute, and raise ores for regular samplings.

At Raleigh Mine meeting, on Tuesday, the accounts for April, May, June, and July showed—Mine cost and merchants' bills, 606l. 10s. 1d.—By calls, 480l.; leaving balance against adventurers, 126l. 10s. 1d.—A call of 1l. 10s. per share was made.

At Trebell Consols meeting, on Thursday, the accounts showed balance in favour of the company of 1353l. 3s. 7d. The purchase of the engine, stamps, &c., of Runnford Coombe Mine, was agreed to, and immediate orders given for its removal and erection on this mine, when returns of tin can be made.

A special general meeting of Wheal Vincent adventurers, of a most satisfactory character, was held at the offices, King-street, on the 30th Sept., the arrears of calls (except an inconsiderable sum) being all paid, and the mine reported as bearing unmistakable evidences of wealth from the operations of the streamers over the north lode, where, at the shallow depths of their workings, they were taking away large quantities of tin. The mine will go to work, and the lode be cut in the 20 fm. level, for the sum of 50l., as soon as there is water to work the wheel; and the present body of adventurers will cheerfully pay any further call necessary for the erection of a steam-engine, the prospects of the mine fully warranting the outlay.

At Cwmystwyth Mine the sampling of lead ore is expected to be 50 tons. Six men are driving east in Penglan. The lode in the winze under level Vaur, and in Kingside adit, is turning out good ore, but the ground is hard.

At Boringdon Park Mine another parcel of rich silver-lead ore is being prepared for market.

At Kilbricken Mine, in the 20 fm. level, lode varies from 2 to 8 ft. wide, yielding rich stones of lead embedded in a most congenial stratum, some of which weighing  $\frac{1}{2}$  cwt., are to be seen at the offices in Cornhill—the assays from which, by Messrs. Johnson and Co., we expect to announce in our next publication.

At the Molland Mines, the lode in the bottom of the shaft is reported to yield 1 ton of rich copper ore per fm.

At Caradon Wood, the water-wheel is expected to be set to work in about a fortnight.

The mines of Cardiganshire have been favoured with heavy showers of rain; consequently the operations, which have been seriously retarded by the long drought, are in a situation to resume work, and much larger returns of mineral produce are anticipated for the next quarter.

At East Daren, the new 30-ft. wheel was put to work on the 22d Sept., and has nearly forced the water to the 20 fm. level, so that the ends will be progressing very shortly.

At Cwm Erfin the crushing-mill will be at work in a short time. They have a good lode in the eastern end in the 45, yielding  $\frac{1}{2}$  ton of lead ore per fm. The 10 east will turn out about 17 cwt. per fm., and the stopes from 10 to 12 cwt.

At Merilyn Mine, the report (which is inserted in full among our Mining Correspondence) shows the lode to be worth 12l. per fm. in the shaft, and 15l. per fm. in the 16 fm. level. The lode in the 15 yard level is worth 25l., and the rise in the back 15l. per fm.

At the Carbona Tin Mines, between Crowan and Hayle, the produce for Sept. is 64 tons, and that expected for the present month 100 tons, of tin stuff. The engine-shaft is down to a 45 fm. level; the lode improves as it deepens; the ground is driven at the 35, for 25s. and 30s. per fm.; the 45, at 2l.; all opening well for the tributers. The concern is in 2000 shares, of 4l. each. A full report will be found among the British Mines.

Several meetings have already been held in the Peak district of Derbyshire, to consider the present state of the mineral laws and customs of the Wapentake, and an important one is advertised to take place at the Moot Hall, Wirksworth, on Monday, to consider the propriety of memorialising the Chancellor of the Duchy of Lancaster to introduce a Bill into Parliament to define and amend the mineral customs, and to promote the better administration of justice in the Barmote Courts. The late Act of Parliament is not considered efficient.

Wheal Trewane, which, through some disagreement among the shareholders has, for many months, been nearly idle, has passed into the hands of a new city company; and from the active preparations making for spirited operations, and the indications of the silver-lead lodes in the sett, it is expected speedily to take its place in the list of dividend-paying mines. Some shareholders recently sent Capt. Hosking to inspect the mine, whose report will be found among our Mining Correspondence.

At South Tolgus, the lode in the 54 east yields  $\frac{1}{2}$  ton per fm.; in the 45 west 1 ton; in the 42 west, on Youren's lode,  $\frac{1}{2}$  ton; east, 1 ton; in the 32 east,  $\frac{1}{2}$  ton per fathom. All the ore is of excellent produce, and the prospects generally are exceedingly good.

At Wheal Precious the ground is harder in the 12 cross-cut, and letting out much water—expecting to intersect the lode next week. In the shallow adit it is from 9 to 18 in. wide—good gossan and spots of ore; the end at present more sparry. Driving north and south the ground is favourable.

At Wheal Fanny, some fine stones of lead ore have been taken out of the old workings.

We have repeatedly, as our readers are aware, directed public attention to the great and evidently growing importance of the Tavistock district, as the mineral field to which we must look for the development of the treasures of the earth, to counteract the effect of diminished supply and total extinguishment of some of our older mines. The geological structure of many parts of that district, the favourable angular position of the lodes, and the well-known productiveness of many of those wrought on, give promise of success sufficiently hopeful to keep alive the spirit of enterprise in that direction. But although on the western side of the town of Tavistock some of our best mines are now working with the richest results, the great mineral field in the same tract, and under even more favourable conditions, considered geologically, on the eastern side, has remained a sealed book, its contents unexplored—in fact, as truly a virgin soil as the Pampas of South America, or the gold-bearing regions of California or the Australias—Wheal Friendship, which has yielded enormous profits for a period of 60 or 70 years continuously, and which is still remunerating her proprietors, being the only copper mine in the district, up to a very recent period. The discoveries which have been made in the Devon Burra Burra Mine have at length given an impulse in the right direction, and we hear that the whole of the ground in the neighbourhood has been taken up by the most eminent mining men—not for the purpose of selling shares in the market, but solely with a view to legitimate mining. Among others, we hear that Mr. Josiah Hitchens, and his friends, have taken the parallel ground to the Devon Burra Burra, part of Whitechurch Down, and that Capt. James Carpenter, and other experienced miners, are sanguine as to the result. We understand a powerful engine will be erected there also, and we expect to witness shortly a good array of engines at work in that interesting neighbourhood.

During the week, shares have been sold in Alfred Consols, West Alfred, Tremayne, Wheal Robins, Kilkendbrightshire, Bargally, Speedwell, United Mines, South Caradon, Samson, Trannack and Bosence, Trehan, Merilyn, Mining Company of Ireland, Wicklow Copper Mine, North Robert, Nant-y-Car, Caradon Wood, Helvellyn, East Boringdon, Chyprase Consols, Tremar, Devon Consols North, West Polgoth, Devon Great Consols, Treviskey and Barriest, West Providence, Trelawny, Wheal Ruth, Mary Ann, Kilbricken, Penzance Consols, Hingston Down, South Tamar, South Tolgus, Wheal Arthur (Calstock), Bedford United, Wheal Lemon, Bodmin Consols, Henneock, East Tamar, Wheal Harriet, Wheal Russell, Pendarves and St. Anbyn, Wheal Williams, Raleigh, Condurrow, Silver Valley and Wheal Brothers, Wheal Williams, Raleigh Mine, Condurrow, &c.

In foreign shares, transactions have taken place in United Mexican, Cobre, and Worthing, at an advance.

From Linares the advices are to the 20th Sept. The 55, west of Wilcoff's, is hard, worth for lead only  $\frac{1}{2}$  ton per fm.; the stopes east, yield 3 tons of lead ore per fm. The 45, east of Shaw's, yields 3 tons, opening

moderate tribute ground. The tribute pitches are turning out fairly. Lead ore weighed in to the 20th Sept., 43 tons 6 cwt.; total in stock, 270 tons. Pig-lead smelted, 25 tons; in stock, 396 tons.

From Santiago de Cuba the advices are dated the 23d August. When the communication with Taylor's shaft had been effected to the 22 fathom level, no flood had been met with, and the water remained as before, from which it is inferred that the lode from the ore had latterly been raised in still unintersected. The cross-cut south is, therefore, continued on, and the next advices are likely to prove the correctness of this supposition.

The report of the annual meeting of the South Australian Mining Association, which will be found in another column, will be read with much interest. The progress of the Burra Burra has been successful beyond a parallel in the history of this extraordinary mine. In six months nearly 13,000 tons of copper ore were raised, with an average produce of 21 per cent., representing, within 200 tons, as much fine copper as was raised during the past quarter in the entire counties of Cornwall and Devon. New discoveries had been made, and there is every probability that future operations will realise still larger profits.

The Australian Mining Company have advices to 30th May. The following is an extract from the manager's report:—

Capt. Phillips had received all the castings for the stamping machinery. The lode in Polkinghorne's winze is looking something better; we are also getting some good ore from the 16 fm. level in Downe's Mine, and have passed through a good bunch of ore in Hagen's lode. When Wotton's shaft is completed—say, by the beginning of July—with these improvements, the north end mine coming into play, and the stampers in full work, we shall at last have passed the turning point in the tide of our affairs, and shall therefore cease to be such an unceasing drag as we have hitherto been upon the means of the directors. I judge that the stampers should bring us funds to the value of about 9000l. per annum; and from what I have seen under ground, I believe the statement made to me, that there is now left in the old and present workings a supply sufficient to last for two years; while in Baker's lode in the 10, and downwards from thence, the lode appears to continue productive of, at all events, halvans; so that I do not anticipate, from present appearances, any interruption to the regular supply from the stampers. This is, of course, leaving entirely out of consideration the question of our likelihood of again meeting the richer deposits as we proceed.

Advices have been received from Australia a fortnight later than our last intelligence. Nothing had transpired to throw any doubt on the fact of gold promising a large yield, but the severity of the winter at Bathurst was driving many diggers away; those, however, properly prepared were getting a good deal of gold. New diggings are said to be discovered daily; and it is reported that Government will have a conveyance, three times a week, to bring gold to Sydney, for which they will receive a per centage.

The municipal council of Brussels, in its last sitting, adopted a proposition, by 17 votes to 10, for reducing the octroi duty on coals from 4 fr. to 2 fr. the 1000 kilogrammes.

#### THE MINING EXCHANGE—OFFICIAL SHARE LIST.

Sir,—Your Journal has already published, as a gratuitous benefit to general traffickers in mining property, "The Mining Exchange Official Share List" and proceedings, whereby those who run might read, if they choose, what kind of stock should be invested in, and how to effect it.

The rules of the Mining Exchange have been altered, and the place of the Exchange removed to this Hall, in compliance with what seemed a prevalent wish, with a view to a large influx of members.

That such efforts to combine mining men into a tacit resolve upon elevating their commercial pursuit not fully succeeded, should be a matter of regret, and not of complaint, especially by those who are fully aware that the "rank and gross" things in the Share List are nurtured by only a paucity of the mining agents and speculators. The members of the Mining Exchange are chiefly commission agents or dealers, and it is, therefore, preposterously absurd and mean to expect that the information and advantages found by them within the Exchange are to be conferred, as of course, upon particular non-subscribers, or the general public.

If it be said the subscription to the Mining Exchange is too high—I answer, it is only in proportion to the expenses; but that, if mining men came forward, as they undoubtedly should, to assist in establishing a *bona fide* mining market—say, to the number of 100—the admission fee could be reduced more than one-half; seeing, however, that your able advocacy of a Mining Exchange has not been properly responded to, I do not at present anticipate a great accession of members.

I must be pardoned for asking mining gentlemen if it is the taint of envy, jealousy, a morbidly exclusive desire for easily gotten wealth, uncharitableness, and a tendency to depreciate the mining transactions and interests of others, which some of them are charged with, which keep so many away from the Mining Exchange; or what is it? Let it be known, so that if there be something wrong in principle in the institution, it may be remedied. I beg to enclose the Mining Share Lists, as now approved of by the Mining Exchange Committee, errors and omissions excepted. It is, however, not to be presumed that the weeding of the list has been effected as something due to the public, and that it will, of course, be continued. Indeed, there are so many new mines, so called, being continually brought out, to the great injury of legitimate schemes, that we may be fairly excused for saying as to the good ones amongst them,—

"They are under so much dirty rubbish laid, To find them out is the Cinder-woman's trade, Who, for the last remnants of a fire, Would grovel all day in ashes and in mire."

I shall be happy to receive such information (from any quarter) as will conduce to make the lists as perfect as possible. JAMES STRAID, Honorary Secretary of the Mining Exchange.

[We have received the Share List as arranged by Mr. Stride, and which appears to be both explanatory and comprehensive; but the alterations are so numerous, and the arrangement so varied from our present form, that we have no time even to examine into its practicability; we must, therefore, defer its consideration until our next Journal.]

A. M. Montheulin, of Paris, lately deceased, has left a legacy of 400l. to any person who shall invent the means of guiding balloons in a straight line.

THE SUBMARINE TELEGRAPH.—In consequence of the unfavourable state of the wind and weather, nothing further was done to the submarine cable until Sunday, when the breeze moderated, and by five o'clock in the afternoon a coil of gutta percha covered wire was attached to it; and after safely reaching the shore the remaining portion was buried in the sand above low-water mark, where it will remain until sufficient iron-covered cable is made to replace it. The experiments tried by firing cannon on Dover heights, by a battery on the French coast, communicating by Henley's magneto-electric, Reid's double needle, and Brett's printing telegraphs, proved that the communication and insulation were perfect, and Paris is now in direct instantaneous communication with the British Coast.

#### TESTIMONIAL TO MICHAEL WILLIAMS, Esq.

The Committee beg to announce that subscriptions may be paid to the East Cornwall Bank, at Liskeard and Bodmin; the Cornish Bank, Truro, Redruth, and Falmouth; Messrs. Bolithos, bankers, Penzance and St. Ives; Mr. Carne's Bank, Penzance; or to either of the following gentlemen—viz.: Mr. H. Grylls (the Treasurer), Redruth; Mr. R. Pearce, Penzance; Mr. S. James, St. Just; Mr. R. B. Michell, Marazion; Capt. Thomas Richards, Foundry House, Hayle; Mr. R. H. Pike, Camborne; Mr. W. Burgess, Illogan; Mr. Pryor, Town-hall, Redruth; Mr. Little, Redruth; Mr. E. H. Hawke, Tolgus, St. Day; Mr. H. Pearce, Royal Hotel, Truro; Mr. R. B. Broad, Falmouth; Mr. J. Morcom, St. Austell; and Mr. Field, Mining Exchange, London. No subscription to exceed Five Shillings. Any smaller sum will be received. The list to be closed on the 29th November. THOMAS GARLAND, Hon. Secretary to the Committee.

#### LEAD ORES.

BIDDINGS FOR 20 AND 6 TONS SILVER-LEAD ORE FROM COURT GRANGE MINES. Bidders. Sold at Aberystwyth, 26th Sept. Amount Bid. Newton, Keates, and Co. (purchasers) £14 2 6 and £11 5 0. Sims, Williams, Nevill, and Co. 12 12 6 " 10 16 0. Thomas Somers 12 13 6 " 10 3 6. Tamar Smelting Company 11 12 6 " 7 10 0.

TICKETINGS FOR ABOUT 100 TONS LAKEN LEAD ORE. Bidders. Douglas, Isle of Man, Sept. 21. Amount Bid. Walker, Parker, and Co.—Dee Bank (purchasers) £18 3 0. Mather and Co.—Bagillt 17 14 6. Newton, Keates, and Co.—Bagillt 17 13 6. John P. Eytton—Llanerchymor 16 18 0. Sims, Williams, Nevill, and Co.—Llanelli 16 15 0. Thomas Somers—Bristol 17 1 6. Tamar Smelting Company—Beeralston 15 5 0.

TICKETINGS FOR ABOUT 100 TONS NEWTONARD'S LEAD ORE. Bidders. Douglas, Isle of Man, October 1. Amount Bid. Newton, Keates, and Co. (purchasers) £10 1 6. Tamar Smelting Company 8 6 0. Thomas Somers 8 9 6. Sims, Williams, Nevill, and Co. 9 16 6. Pontifex and Wood 7 14 0. Locke, Blackett, and Co. 9 2 6. W. J. Cookson and Co. 9 5 0.

Sold at Newcastle. Tons. Price per Ton. Purchasers. Black Craig 40 £9 6 0 H. L. Paterson. ditto 40 £9 0 0 Richardson & Co. ditto 50 £9 10 0 Shield & Turnbull. Sold on the Mine. Keewick 16 £9 5 0 Locke, Blackett, & Co. Callington 45 £6 6 0 T. Somers.

#### BLACK TIN

Mines. Tons. Price per Ton. Purchasers. Polberon 20 £17 7 6 Enthoven and Biscoe Co. Lewis Mines 20 £10 0 0 Union and Mellanar Co. ditto 42 £6 2 6 Ditto and ditto

#### COPPER ORES.

Sampled Sept. 10, and Sold at Swansea, Sept. 30, 1851.

| Mines. | Tons. | Prod. | Price.   | Mines.     | Tons. | Prod. | Price.  |
|--------|-------|-------|----------|------------|-------|-------|---------|
| Cobre  | 96    | 163   | £11 18 0 | Chill      | 53    | 454   | £35 1 6 |
| ditto  | 82    | 16    | 11 19 0  | ditto      | 52    | 471   | 37 2 6  |
| ditto  | 81    | 16    | 12 1 0   | ditto      | 51    | 47    | 36 14 6 |
| ditto  | 60    | 16    | 12 2 0   | ditto      | 50    | 461   | 35 15 0 |
| ditto  | 58    | 231   | 18 1 6   | ditto      | 49    | 498   | 26 19 0 |
| ditto  | 47    | 231   | 17 15 6  | ditto      | 48    | 231   | 18 16 6 |
| ditto  | 43    | 244   | 18 13 6  | ditto      | 40    | 231   | 17 14 6 |
| ditto  | 23    | 19    | 14 8 6   | Berehaven  | 104   | 9     | 7 9 6   |
| ditto  | 12    | 818   | 60 0 0   | ditto      | 95    | 9     | 7 9 0   |
| ditto  | 91    | 163   | 12 7 6   | ditto      | 82    | 91    | 7 1 6   |
| ditto  | 90    | 163   | 12 4 0   | Knockmahon | 80    | 84    | 6 18 6  |
| ditto  | 68    | 163   | 12 3 6   | ditto      | 75    | 9     | 5 14 6  |
| ditto  | 67    | 241   | 18 8 6   | ditto      | 63    | 9     | 5 14 6  |
| ditto  | 63    | 244   | 18 12 6  | ditto      | 49    | 9     | 5 14 6  |
| ditto  | 49    | 241   | 18 14 6  | Kaw-aw     | 40    | 151   | 11 3 0  |
| ditto  | 48    | 163   | 12 1 6   | ditto      | 34    | 151   | 11 3 0  |
| ditto  | 32    | 191   | 15 1 6   | ditto      | 32    | 77    | 5 15 6  |
| Chill  | 64    | 461   | 36 0 0   | ditto      | 1     | 521   | 41 10 0 |

#### TOTAL PRODUCE.

|        |      |             |            |     |           |
|--------|------|-------------|------------|-----|-----------|
| Cobre  | 1000 | £14851 11 6 | Berehaven  | 281 | £2065 6 0 |
| Chill  | 397  | 11994 2 0   | Knockmahon | 267 | 1546 13 6 |
| Kaw-aw | 97   | £999 19s.   |            |     |           |

#### COMPANIES BY WHOM THE ORES WERE PURCHASED.

|                             | Tons. | Amount.      |
|-----------------------------|-------|--------------|
| English Copper Company      | 183   | £2428 16 0   |
| Pascoe Grenfell and Sons    | 326   | 3538 3 6     |
| Sims, Williams, & Co.       | 289   | 5801 8 0     |
| Vivian and Sons             | 235   | 5487 17 0    |
| Williams, Foster, and Co.   | 616   | 7717 13 0    |
| Miles Royal                 | 116   | 1551 15 0    |
| Schneider and Co.           | 46    | 521 9 0      |
| Low's Patent Copper Company | 103   | 3903 3 6     |
| F. Bankart                  | 28    | 487 1 0      |
| Total                       | 2042  | £31,437 12 0 |

Copper Ores for Sale October 21.—Berehaven, 600—Cobre, 450—Burra Burra, 187—Knockmahon, 158—Dudley Slag, 137—Havannah, 79—New Zealand, 43—Maryport, 9—Total, 1654 tons (21-cwts.)

#### AVERAGES.

| Produce.                           | Price.  | Standard.            |
|------------------------------------|---------|----------------------|
| British                            | 8 1/2   | £6 11 6              |
| Foreign                            | 24 9-16 | 18 12 6              |
| Sale                               | 20 5-16 | £15 7 6              |
| Totals—British, 548; Foreign, 1494 |         | 2042 tons (21-cwts.) |

#### AVERAGES OF LAST SALE.

| Produce.                          | Price.   | Standard.            |
|-----------------------------------|----------|----------------------|
| British                           | 9 11-16  | £7 3 0               |
| Foreign                           | 17 15-16 | 13 9 6               |
| Sale                              | 15 1/2   | £11 5 0              |
| Totals—British 662; Foreign, 1227 |          | 1889 tons (21-cwts.) |

#### COPPER ORES.

Sampled Sept. 17, and Sold at White's Hotel, Pool, October 2.

| Mines.        | Tons. | Price.  | Mines.            | Tons. | Price.  |
|---------------|-------|---------|-------------------|-------|---------|
| Tincroft      | 72    | £4 4 6  | Camborne Veau     | 70    | £3 8 0  |
| ditto         | 70    | 4 5 6   | ditto             | 52    | 4 8 0   |
| ditto         | 61    | 2 8 0   | Stray Park        | 25    | 2 0 0   |
| ditto         | 60    | 1 19 0  | Wheal Francis     | 73    | 4 0 0   |
| ditto         | 56    | 3 12 0  | ditto             | 66    | 3 0 0   |
| ditto         | 55    | 5 2 6   | ditto             | 48    | 4 10 6  |
| ditto         | 51    | 5 1 0   | ditto             | 38    | 4 18 0  |
| ditto         | 48    | 3 14 0  | East Pool         | 65    | 3 6 0   |
| ditto         | 47    | 7 8 0   | ditto             | 65    | 4 10 6  |
| ditto         | 45    | 1 19 0  | ditto             | 64    | 2 12 0  |
| ditto         | 41    | 3 0 0   | ditto             | 60    | 3 6 0   |
| ditto         | 39    | 2 2 0   | ditto             | 25    | 1 3 0   |
| ditto         | 35    | 6 10 6  | East Wh. Crofty   | 92    | 5 4 0   |
| Wheal Seton   | 100   | 5 4 0   | ditto             | 69    | 4 8 0   |
| ditto         | 83    | 5 4 0   | ditto             | 45    | 4 8 0   |
| ditto         | 65    | 7 11 6  | ditto             | 36    | 1 12 0  |
| ditto         | 64    | 5 18 0  | Dudman            | 5     | 6 16 0  |
| ditto         | 57    | 4 6 6   | Longloose         | 5     | 4 16 0  |
| ditto         | 55    | 5 18 0  | Condurrow         | 70    | 2 6 0   |
| ditto         | 53    | 2 14 0  | ditto             | 60    | 4 10 6  |
| ditto         | 44    | 2 18 0  | ditto             | 56    | 6 4 0   |
| ditto         | 43    | 7 3 6   | ditto             | 40    | 4 6 6   |
| ditto         | 23    | 2 10 0  | ditto             | 39    | 0 17 0  |
| ditto         | 19    | 3 11 0  | ditto             | 23    | 12 1 0  |
| North Pool    | 88    | 3 6 6   | South Wh. Francis | 53    | 6 7 0   |
| ditto         | 74    | 1 16 0  | ditto             | 38    | 6 6 0   |
| ditto         | 72    | 5 2 6   | ditto             | 33    | 6 10 6  |
| ditto         | 64    | 2 18 0  | ditto             | 22    | 14 18 6 |
| ditto         | 60    | 3 14 0  | Fowey Consols     | 83    | 5 14 6  |
| ditto         | 58    | 3 4 0   | ditto             | 77    | 6 2 0   |
| ditto         | 52    | 4 18 0  | Dolcoath          | 55    | 2 14 0  |
| ditto         | 21    | 2 8 0   | ditto             | 47    | 8 1 6   |
| Wheal Bassett | 110   | 1 5 6   | ditto             | 39    | 4 4 0   |
| ditto         | 107   | 7 8 6   | North Boscare     | 89    | 5 14 6  |
| ditto         | 86    | 3 11 0  | Prideaux Wood     | 40    | 4 3 6   |
| ditto         | 59    | 6 14 6  | Pendarves Consols | 33    | 3 10 0  |
| ditto         | 51    | 5 2 6   | Gustavus Mines    | 24    | 3 8 0   |
| ditto         | 50    | 3 12 0  | Wheal Elizabeth   | 16    | 2 9 0   |
| ditto         | 30    | 22 14 0 | ditto             | 4     | 10 8 6  |
| ditto         | 27    | 22 14 0 | Carthew Consols   | 19    | 4 12 0  |
| ditto         | 1     | 43 0 0  | Wheal Penhale     | 12    | 4 16 0  |



## NOTICES TO CORRESPONDENTS.

- "H. E. C." (Plymouth).—We cannot give the names of brokers who supply us with any particular quotation, but we will at all times forward a letter, which they can attend to. This answer will apply to inquiries from several correspondents.
- Mr. MICHAEL WILLIAMS.—Sir: I see an advertisement in your last Journal to the effect that Michael Williams, Esq., is to be presented with a piece of plate for his exertions in United Mines. I ask why he should not receive a similar testimonial for his exertions in Consols Mines?—AN OBSERVER.
- "M. B." (Cornhill).—Messrs. Pinto, Pores, and Co., of Crutched Friars, are the proprietors of several extensive mineral properties in Norway.
- "A Subscriber" (Newcastle-upon-Tyne).—We cannot give the name, but will forward a letter.
- "D. O." (Dorset).—We cannot give the information; apply to some respectable agent who will readily advise.
- "R." (Plymouth).—The quotation was forwarded to us by a broker, who now informs us that he is prepared to dispose of a number of shares at even a less figure.
- "A Reader" (Lincoln).—Should procure our Glossary of English and Foreign Mining and Smelting Terms (2s.); he can then overcome the difficulty he complains of.
- "W. R." (Launceston).—We should be very glad of an occasional contribution; articles of news are always acceptable. We make no charge for inserting periodical reports, or notices of meetings.
- We shall be glad to hear from "Adelphi" as opportunity offers.
- "W. H." (Baindon Consols, Leland).—Tables of the comparative standard, produce, and price of copper ores, as worked at the Cornish ticketings, may be procured at any station in the principal towns in Cornwall, and may be had from 3d. each, up to Provins large official tables, published at 30s.
- Mr. Hopkins is at Tavistock, where his letters should be addressed.
- "T. W. J." (Whitington Club).—We have forwarded a copy of the communication to the pursuer of the respective mines, who will, doubtless, communicate with the writer.
- "An Adventurer" (City).—Had better consult Mr. Hopkins, at his office, 13, Austin Friars.
- NATIONAL BRITISH MINING ASSOCIATION.—We have received a long communication from a correspondent in the Brazils, under the signature of "A Looker-On," relative to the reports of the agent, Capt. Samuel Bowden, and the observations of the directors, on the Cuiaba Mine, inserted in the *Mining Journal* of 4th January last. Our space will not allow of its insertion, nor do we think its publication would prove of the least interest, either to the shareholders or our general readers. The principal complaint of the writer is, that the statements in these reports are not founded on fact, and that they contain imputations on the characters of the former managing captains of the mine. He states that Captain John Hitchens cut the very lode two years previous to Captain Bowden going out, which report ascribes to the latter, to effect which he drove 8 ft. through a hard capel 10° south of west; that instead of the lodes being likely to get richer in depth, they are actually impoverishing; that the statement of Captain Bowden, as to the zig zag and random drivings of former managers is not true, there is no record of them in the plans, and that he acknowledged he never explored or saw them, but took the idea from a man named Clowin, whose word he took for it. It would be surprising to go further into the remarks contained in the letter, which, knowing the writer, we much regret contains personalities and abusive language, which, under no circumstances, could be admitted into our columns. The directors are amenable to the shareholders for their proceedings, and, as far as our experience has gone, their conduct generally has met the approbation of a large majority.
- DEVON HAYTOR GRANITE COMPANY.—Sir: Not perceiving these shares quoted in your Journal, I should feel obliged if some correspondent would inform me their present value, and what are the prospects of the undertaking?—S. T.: Bury, Lancashire, Oct. 1.
- "O. A."—Late reports from the mine are decidedly favourable, some important improvements having taken place.
- "Enquirer" (York).—The Great Wheel Diamond sett is in Stoke Climsland, Cornwall: the other particulars can be obtained on application at the office, 4, King-street, Cheapside.
- "Bots's" communication is acknowledged, and will be attended to in our next.
- "Pyrotechnist" on the New Blasting Powder—"R. S." on the Government School of Mines—and a paper on Explosion of Steam Boilers, shall appear in our next Journal.

## The Theory of Mineral Veins,

BY EVAN HOPKINS, ESQ., C.E., F.G.S.

We have pleasure in announcing, that the chapter on this important subject, as newly written for the second edition of Mr. Hopkins's work on "Terrestrial Magnetism," will appear, as a series of papers, in the *MINING JOURNAL*, with the necessary illustrations.

## The Cost-Book System.

Having repeated applications for particulars respecting the Cost-book System, we have reprinted, as a pamphlet, the paper descriptive of its principles and practice, which appeared in the *Mining Journal*. Copies can be procured through any bookseller or newsman, or at our office, price 6d.

\* We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

\* It is particularly requested that all communications may be addressed—  
TO THE EDITOR,  
*Mining Journal Office,*  
26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, acting for the proprietors.

THE MINING JOURNAL  
Railway and Commercial Gazette.

LONDON, OCTOBER 4, 1851.

The *MINING JOURNAL* is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

In presenting our usual quarterly detailed statement of the weekly sales of copper ores in Cornwall, and a comparative view of the results with those of antecedent periods, we have but few remarks to offer upon the general aspect of the account, which we here give:—

ACCOUNT OF THE SALES OF COPPER ORES IN CORNWALL,  
IN THE QUARTER ENDING 30TH SEPT., 1851.

| Date of Sale.   | Average Stand. | Average Produce. | Average Price. | Quantity of Ore. | Computed Quantity of fine Copper. | Amount of Sales. | Value of Ore to produce 1 ton of Copper. |
|---|----------------|------------------|----------------|------------------|-----------------------------------|------------------|--|
| 1851.   | £ s. d.        | p. cent.         | £ s. d.        | 21-cwt.          | Tons c.                           | £ s. d.          | £ s. d.                                  |
| July 3.....   | 100 12 0       | 84               | 5 8 0          | 3377             | 273 16                            | 18,265 14        | 66 14 3                                  |
| " 10.....   | 99 19 0        | 84               | 5 10 0         | 3541             | 210 12                            | 14,015 14        | 66 10 9                                  |
| " 17.....   | 95 19 0        | 84               | 5 16 0         | 2542             | 252 15                            | 16,443 12        | 65 1 2                                   |
| " 24.....   | 102 5 0        | 75               | 5 0 0          | 2096             | 225 17                            | 14,881 19        | 65 7 10                                  |
| " 31.....   | 103 10 0       | 74               | 4 13 0         | 4172             | 299 17                            | 15,562 19        | 65 4 10                                  |
| Aug. 7.....   | 102 4 0        | 74               | 4 19 0         | 2775             | 209 14                            | 13,804 0         | 65 16 7                                  |
| " 14.....   | 95 6 0         | 98               | 6 4 6          | 3183             | 299 17                            | 19,822 17        | 66 2 2                                   |
| " 21.....   | 103 8 0        | 74               | 4 11 6         | 2401             | 170 7                             | 11,011 10        | 64 12 10                                 |
| " 28.....   | 102 2 0        | 74               | 5 0 0          | 3505             | 266 4                             | 17,544 5         | 65 78 1                                  |
| Sept. 4.....  | 99 1 0         | 84               | 5 13 0         | 2848             | 241 9                             | 16,081 9         | 65 12 1                                  |
| " 11.....   | 95 18 0        | 84               | 5 15 0         | 2630             | 233 13                            | 15,182 5         | 64 13 7                                  |
| " 18.....   | 101 3 0        | 74               | 5 2 0          | 3197             | 242 10                            | 16,450 3         | 65 18 8                                  |
| Totals & averages for the quarter ending Sept. 30.    | 98 5 5         | 80.48            | 5 5 11         | 36,487           | 2933 12                           | 193,066 10       | 65 16 3                                  |
| Ditto quarter ending 30th June, 1851.                 | 100 15 1       | 7.769            | 5 1 7          | 39,702           | 3084 11                           | 201,655 14       | 65 7 6                                   |
| Ditto quarter ending 31st March, 1851.                | —              | 7.859            | 5 4 4          | 36,869           | 2897 4                            | 192,374 11       | 66 7 3                                   |
| Ditto quarter ending 31st Dec., 1850.                 | —              | 7.887            | 5 6 10         | 39,843           | 3103 9                            | 210,122 7        | 67 14 1                                  |
| Ditto for year ending 30th Sept., 1851.               | —              | 7.888            | 5 4 8          | 152,371          | 12018 10                          | 797,119 3        | 66 6 5                                   |
| Av. quarterly quantities & amounts for the last year. | —              | —                | —              | 38,093           | 3004 14                           | 199,279 15       | 10                                       |
| Annual aver. for 19 years, from June, 1832 to 1851.   | —              | 7.836            | 5 14 8         | 147,631          | 11569 0                           | 846,257 0        | 73 3 0                                   |

In commenting upon the operations of the quarter ending at Midsummer, in our Number of the 5th July, we assumed that, "as it was fairly presumable that some, at least, of the mines recently brought to public notice, would be carried actively into operation, an increased quantity of ore might be expected thenceforward." Such an assumption, however, still waits realisation; as it will be seen, by the above account, that the quantity of ore sold, in the last quarter, at the public ticketings, is less than that of the preceding quarter, by 3245 tons, yielding less copper, by 151 tons, and a smaller amount in money, by 8589*l.* On the other hand, the produce is higher than that of the last quarter, in the proportion of 8.048 to

7.769 per cent.; and the average price is higher, being 5*l.* 5*s.* 11*d.* against 5*l.* 1*s.* 7*d.* per ton of ore. But this excess of 4*s.* 4*d.* per ton in price, is only about 7*d.* per ton more than the sum which the higher produce of this quarter, compared with that of the Midsummer quarter, would require, as the equivalent of such additional richness. The value of ore to produce a ton of copper, necessarily stands at a somewhat higher figure than that of the Midsummer quarter; being 65*l.* 16*s.* 3*d.* against 65*l.* 7*s.* 6*d.*

If we follow the examination of the quarter now terminated, by a comparison with the year of which it forms the concluding portion, the same results, in the main, will appear; namely, a less quantity of ore and copper, with a diminished money amount, as well as of the value of ore to produce a ton of copper; but exhibiting a produce and price higher than the year's average. And, although the produce of the quarter, and of the whole year, exhibits a somewhat higher amount than the average from 1832 to the present time, the price of the year stands below the 19 years' average, by 10*s.* a ton, being as 5*l.* 4*s.* 8*d.* to 5*l.* 14*s.* 8*d.*; and the value of ore to produce a ton of copper, by the same rule, is 66*l.* 6*s.* 5*d.*, for the year now terminated, against 73*l.* 3*s.*, for the 19 years.

This difference of nearly 7*l.* per ton of copper, against the miner, he would, doubtless, gladly see restored to him; and to which, on every principle of equal justice and fair dealing, he is strictly entitled; nor would the smelter suffer by such a state of things.

We return again to the consideration of the GOVERNMENT SCHOOL OF MINES, to which we have on previous occasions directed attention. The importance of such an establishment to the mining interests of this country is too evident to require any comment. We possess a much larger amount of mineral wealth than any other kingdom—Great Britain furnishing nearly one-half of the mineral produce of all Europe, and yet, up to the present time, there has not been an institution in the country which aimed at furnishing that information which is required for the successful prosecution of mining industry. It is satisfactory, however, now to find that the Government has felt the necessity of providing for this want. The establishment of the School of Mines is a great advance in the proper direction: it will be seen from our former articles that we do not consider it so complete as we could desire, and we hope to see some of the objections which we have urged eventually removed. At the same time, we must express our conviction that the institution contains the elements of success, if properly applied, and that it must tend to the improvement of mining and metallurgy. We know that many difficulties have been thrown in the way of the present organisation, and to these, we believe, is chiefly due those objections to which we have referred, and which may, in our opinion, for a period—we hope a brief one—retard that progress of usefulness which must be made by faithfully carrying out the intentions expressed in the programme which has been circulated. With that programme before us, we think it of the utmost importance that we should examine into the capabilities of the establishment as now constituted.

The Government School of Mines is in immediate connexion with the Museum of Practical Geology.

The Geological Survey of the United Kingdom being carried on in connexion with the Museum, has afforded great facilities for making complete collections illustrative of the applications of geology to the useful purposes of life. These collections contain an extensive series of rocks stratigraphically arranged, with reference to their mode of accumulation, and the subsequent action of various causes upon them; of fossils classed in the order of geological time; of specimens illustrative of the ores of the useful metals, of their mode of occurrence, and of the methods of preparing them for smelting; of mineral substances used for constructing public works and buildings, and of those employed for ornamental purposes, or for the useful arts in connection with chemical or metallurgical manufactures. The processes of converting these raw materials into industrial products are carefully exhibited, and illustrations of the finished products are also displayed. The various arts connected with the mineral resources of the country are illustrated by specimens, showing varieties or peculiar excellencies of manufacture. Models of mines, mining tools, and working models of mining machinery are collected, with the view of exhibiting the various modes of working carried on in different districts. The Museum is open to the public for the first three days of the week, the remaining days being reserved for study.

The arrangements here promise to be very complete; and, indeed, the Museum is already an object of considerable popular interest. The qualifications of the professors to whom the important duty of instruction has been committed, should be thoroughly examined, and with this object we have collected the following particulars, which will, we doubt not, prove satisfactory.

SIR HENRY DE LA BECHE, C.B., is director-general of the Geological Survey of the United Kingdom, of the Museum of Practical Geology, and of the Government School of Mines. The Survey of Devon and Cornwall, his Geological Researches, and the recently published *Geological Observer* of Sir HENRY DE LA BECHE, are well known, and all attest his thorough acquaintance with geology and its practical applications.

MR. ANDREW C. RAMSAY has for many years, as Local Director of the Geological Survey of Great Britain, been in active superintendence of this important investigation in the field; and as a practical geological surveyor we have only to refer to the exactness which distinguishes the geological maps of North Wales which have been published. He held the situation of Professor of Geology in University College, and is the author of several valuable geological papers.

MR. EDWARD FORBES, who has long held a professorship in connexion with King's College, is well known for his valuable researches in natural history. His *History of British Starfish*, and of the Naked-eyed Medusae, may be mentioned, and also his very beautiful Paleontographical Map of the British Isles, published in *Johnson's Physical Atlas*, and his works on Fossils, as published in the *Memoirs of the Geological Survey*, &c.

MR. LYON PLAYFAIR, to whom the Professorship of Chemistry and its applications is assigned, is well qualified for the task, from his great acquaintance with manufactures. The researches of this gentleman on the laws of atomic combination, are known over all Europe, and his long experience, as teacher of chemistry in the College of Civil Engineers, has peculiarly qualified him to be an instructor in an establishment where the applications of science are to receive especial attention.

DR. PERCY, who takes the department of Metallurgy, which is a most important one, has been long associated with the large metallurgical operations of Birmingham; and his practical knowledge was esteemed so highly that, on the occasion of the visit of the British Association to Swansea, he was selected to lecture in explanation of the processes of smelting copper, so extensively carried on in that district. Dr. PERCY's examination of the crystalline slags from iron and other furnaces is also well known.

MR. ROBERT HUNT, who formerly occupied the important post of Secretary to the Royal Cornwall Polytechnic Society, and whose investigations on the electricity of mineral veins, and other papers connected with mining operations, are published in the journals of that society, has mechanical science, or, more strictly speaking, physics, and its applications to mining as his department. An examination of the several scientific works published by this gentleman, and his qualifications as a lecturer show that he is fully fitted him for this duty.

MR. WARINGTON W. SMYTH, M.A., is a gentleman possessing, perhaps, more extensive mining information than any other man in the kingdom. As travelling Bachelor from Cambridge, he visited and spent some years in all the great mining districts of the continent, and as mining geologist to the Geological Survey he has examined all the mining districts of this country, and executed practical surveys of several important localities. We understand, from good authority, that Mr. SMYTH has ever been an ardent student of mineralogy, and that he may be regarded as an authority in this important branch of education to a practical miner.

Such is the Government School of Mines as at present constituted. We have been at some pains to obtain correct information on those points which materially concern the vital interests of this institution, which is capable of being made of the utmost value to the country. We are quite aware that a man cannot be made a miner in the metropolis—actual work in the field is necessary for that. But the information which is to be afforded by such an institution as this becomes of the greatest importance to every man who is to be in any way engaged in the direction of mining operations; and we feel satisfied that a proper acquaintance with those sciences

which bear on the practice of mining, and the operations of mine machinery, must lead to considerable improvement in the systems of mining at present adopted in the United Kingdom.

There are some points of interest connected with the hoped-for establishment of mining schools in the mineral district, to which, on a future occasion, we desire to direct especial attention.

For some weeks past circumstances have been contributing to make it improper that we should any longer remain silent as to the several projects before the public, for the more orderly, convenient, and responsible transaction of mining business in the metropolis. We shall for a moment notice, in the inverse order of their importance, the three schemes which have at all emerged into public notice, and in this order the proposal for an ASSOCIATION OF MINING ADVENTURERS comes first to hand. There can be no objection to this body of gentlemen forming themselves into an association, or into six associations, if they think well of it; but they represent one class of mining interests, and no more, and leave the one great desideratum of a united and comprehensive institution, where all the scattered elements of mining progress and mining business are concentrated and combined, as far from its realisation as ever. It could confer but a fractional part only of the benefit sought for, and which must shortly be obtained.

The second, proposal, for an OFFICE OF MINING RECORDS would, as it appears to us, satisfy a much larger circle of wants than the project just noticed. We require what we think Mr. E. HOPKINS can efficiently provide for the members—viz.: a large body of mining statistics, a registration of mining setts, a catalogue of the mines paying dividends, and of those which do not; and no foundation which does not contemplate and provide for that infusion of practical knowledge in mining affairs and mining management, which capitalists, pursuers, and respectable local reporters are so well known to possess, can be either as deep or as wide as the mining world is at this moment requiring and calling for.

There is no incompatibility between these two schemes and the MINING EXCHANGE, which has been recently founded in Threadneedle-street. In this institution shareholders can take what means they consider most efficient to secure their own sectional interests,—having at hand all the helps from the reports, returns, and statistics to which we have just referred. We think the Mining Exchange, considering the infancy of the institution, and the hindrances necessarily attending the primary movements of such an undertaking, has enlisted on its side a large portion of public support; and it is much more to say, in our opinion, up to this moment, it has fully merited the favour it has received; and we may be allowed to express an earnest hope that no division of councils, no jealousy of individual interests, will be permitted to check its steady growth into enlarged public utility.

## GURNEY'S STEAM VENTILATION.

[FROM A CORRESPONDENT.]

Considerable misapprehension appears to be prevalent respecting the use of high-pressure steam as a means of effecting the ventilation of collieries. It has been frequently and recently stated that it was eminently successful at the Seaton Delaval Colliery, whilst, on the other hand, it has been rumoured that it had been abandoned at that colliery, as well as in others where it had been tried. As the subject is an important one, we have instituted inquiries in the north, and have ascertained that it has discontinued in all but the Seaton Delaval Colliery, and that in it steam is used only as an auxiliary to the furnace. In this capacity it has increased the ventilation from 53,000 to 85,000 cubic feet per minute,—the additional ventilation, therefore, is only 32,000 cubic feet, which proves that the power of the furnace is as 5 to 3, when compared with the results obtained by steam. Two or three years since Mr. Forster stated it to be his intention to try steam separately, and to publish the results. This has never been done; we may, therefore, fairly presume that Mr. Forster's experience since 1849 has not been such as to warrant him in carrying out his intention, as given in his evidence before the Committee of the House of Lords. Taking all the known facts, as regards mine ventilation by high-pressure steam into consideration, it is very difficult to come to any other conclusion than that, practically, it is a decided failure. It is now at least 16 years since Mr. Gurney first promulgated his plans, and three years since they were practically tested in the northern collieries, we may, therefore, presume that both ample time and opportunity have been given to discuss and try the merits of high-pressure steam, and it is high time the question should be definitely settled. Taking the facts as detailed in the parliamentary evidence of 1849, and as now exhibited in Seaton Delaval Colliery, and in the absence of other data of an opposite tendency, we think our readers will not consider the decision we have given either as premature or uncalled for. Whilst thus freely expressing our opinion on high-pressure steam as a means of ventilation, we by no means intend to undervalue it as recently employed to extinguish underground fires, or to detract from the well-earned fame of Mr. Gurney, whose numerous claims to honourable distinction we acknowledged and accord with heart-felt sincerity.

THE INSPECTION OF MINES.—We have learned with deep regret that Government has decided on not increasing the number of inspectors. The vacancy caused by the resignation of Mr. J. K. Blackwell will be filled shortly, and it is to be hoped that the appointment will be made as satisfactorily as those which have preceded it. There is, we understand, a great number of applicants, so that the Secretary of State has an ample opportunity to make a good selection; which we trust he will do, unbiassed by parliamentary interests or political motives.

RAILWAY AXLES—IMPORTANT IMPROVEMENTS.—We have now in our office a model, by Mr. George Little, Electrical Engineer, of one of the most beautiful ideas that we think could possibly be conceived, to prevent the heating of railway axles and the bearing parts of machinery, at present such a source of annoyance and danger during railway transit. Mr. Little's plan is to bore several longitudinal apertures for about 15 inches up each end of the axle, letting the same terminate by several tubes, let into the axle under the body of the carriage, so arranged that their centrifugal force will impel a powerful current of cold air through the apertures, thereby keeping the journals and bearings of the axles from heating. To prevent grit, &c., getting into the grease-box, a circular plate is screwed on the end of the axle. This principle is also applicable to the shafts of stationary and marine engines, and, in fact, all kinds of shafts used in machinery. We shall have pleasure in showing the model to all persons interested in the application of these inventions.

STATISTICS OF BRITISH COMMERCE.—We have now received the third part of Mr. Braithwaite Poole's admirably condensed Commercial Statistics, ranging from G to R; the fourth part, to appear in about a fortnight, will complete the work, which, when bound, will form a most useful volume for reference, for bankers, merchants, manufacturers, directors and managers of railways, and other public companies, brokers, dealers, carriers, agents, clerks—in fact, all persons engaged in the commerce of the country. In the present part, among other valuable matter of interesting information, we have statistical details of the importation of guano, gums, silk plush for hats, hemp, honey, ice, indigo, jute or Indian hemp, shellac, lace, lacquered and japanned wares, lard, hides and skins, logwood, madder, mahogany, mats, bark, molasses, nuts, nutmegs, oils, oranges, pepper, perfumery, potatoes, &c., for several years as comparison. There are also comprehensive tables of imports and exports for 1850, and an excellent article on railways and railway statistics. There are also some interesting details of the iron trade, lead, and other metals.

ENGLISH AND CAMBRIAN ASSURANCE COMPANY.—An adjourned general meeting of shareholders was held yesterday at their offices, New Bridge-street, to consider the report of a committee which had been appointed at the general meeting to consider the claim of Mr. Smith (late solicitor to the company) for also to report on the propriety of allowing an item of 500*l.*, charged by the directors to their services. The report, which was presented by Mr. Boyan (the secretary), was adverse to Mr. Smith's claim, and in favour of the allowance of the 500*l.* to the directors. Mr. Smith objected to the reception of the report on the ground that it was not signed by the members of the committee, but by the chairman on their behalf; and having made this objection formally, he withdrew. The report was then, on the motion of the chairman, seconded by Mr. Lawrence, unanimously agreed to. Mr. Lawrence took the opportunity of congratulating the shareholders on the satisfactory progress of the company; 500 shares having been taken and 35 policies issued since the general meeting, a period of two months. A vote of thanks was then given to the committee and the chairman, which concluded the business of the day.



## STATISTICS OF COPPER, LEAD, AND TIN.

The quarter ended 30th Sept., 1851, having expired on Tuesday last, we now proceed, as is our usual practice, to lay before our readers a summary of the sales of copper ores by public ticketing in Cornwall and at Swansea, from which it will be seen that, notwithstanding the great increase in the number of adventures which have been brought into operation during the past 12 months, there has been a falling off, as compared with the quarter ended 30th June last, of 3245 tons of copper ore; in fine copper, 150 tons 19 cwt.; and in money, 85897. 3s. 6d.; while the average price has increased 4s. 5d. per ton, and produce 0.279 per cent. As compared with the corresponding quarter of 1850, there is a deficiency of 1937 tons, and money 11,247. 18s., with a produce and price nearly equal.

The following are the comparative details:—

| Quar. ending   | Copper Ore. | Fine Cop. | Amount. | Av. Price.    | Av. Prod.      |
|----------------|-------------|-----------|---------|---------------|----------------|
| Sept. 30, 1851 | 7085        | 2933      | 12      | £193,066 10 6 | £5 6 0         |
| June 30, 1851  | 39,702      | 3084      | 11      | £201,655 14 0 | £5 1 7         |
| Decrease       | 3,245       | 150       | 19      | 8,589 3 6     | Inc. 4 5 0.279 |
| Sept. 30, 1851 | 7085        | 2933      | 12      | £193,066 10 6 | £5 6 0         |
| Sept. 30, 1850 | 38,394      | 3104      | 13      | £204,191 8 6  | £5 6 4         |
| Decrease       | 1,937       | 171       | 1       | £11,124 18 0  | £0 0 4.049     |

The total amount of foreign, Irish, and Welsh ores, sold during the quarter by public ticketing at Swansea, was 11,066 tons, producing the sum of 135,376. 9s. 6d., with an average price of 12s. 1s. per ton, being a decrease, as compared with the quarter ended 30th June last, of 1449 tons, and in money, 12,014. 13s., and an increase in the average price of 9s. 2d. per ton. The following are the comparative statements:—

| Quar. ending   | Tons of Ore. | Amount.      | Av. price. |
|----------------|--------------|--------------|------------|
| Sept. 30, 1851 | 11,066       | £135,376 9 6 | £12 4 8    |
| June 30, 1851  | 12,515       | £147,391 2 6 | £11 15 6   |
| Decrease       | 1,449        | £12,014 13 0 | Inc. 9 2   |

And, as compared with the corresponding quarter of 1850, as follows:—

| Quar. ending   | Tons of Ore. | Amount.      | Av. price. |
|----------------|--------------|--------------|------------|
| Sept. 30, 1851 | 11,066       | £135,376 9 6 | £12 4 8    |
| Sept. 30, 1850 | 12,590       | £180,415 4 6 | £14 6 7    |
| Decrease       | 1,524        | £45,038 15 0 | £2 1 11    |

The above quantity of ores was composed of—

|                | Tons of Ore. | Amount.             | Av. price. |
|----------------|--------------|---------------------|------------|
| Foreign.....   | 7230 .....   | £109,137 12 6 ..... | £14 7 9    |
| Irish .....    | 5724 .....   | 26,164 13 0 .....   | 7 0 6      |
| Sundries ..... | 12 .....     | 74 4 0 .....        | 6 3 4      |
| Total.....     | 11066 .....  | £135,376 9 6 .....  | £12 4 8    |

The foreign ores were from the following places:—

|                      | Tons of Ore. | Amount.       | Av. price. |
|----------------------|--------------|---------------|------------|
| Cobre.....           | 3874         | £36,058 9 6   | £14 4 9    |
| South Australia..... | 659          | 12,862 9 6    | 21 0 8     |
| Chili.....           | 397          | 11,984 2 0    | 30 4 0     |
| New Zealand.....     | 653          | 6,922 19 0    | 10 13 6    |
| Copapo.....          | 406          | 5,919 16 0    | 17 0 10    |
| Cuba.....            | 478          | 6,137 11 0    | 12 16 9    |
| Santiago.....        | 404          | 4,406 13 0    | 10 18 2    |
| Canada.....          | 219          | 2,444 8 6     | 11 3 2     |
| Spanish.....         | 238          | 1,331 1 0     | 5 11 10    |
| Total.....           | 7330         | £109,137 12 6 | £14 7 9    |

And the Irish as follows:—

|               | Tons of Ore. | Amount.      | Av. price. |
|---------------|--------------|--------------|------------|
| Berehaven     | 2518         | £19,290 6 0  | £7 13 3    |
| Knockree      | 973          | 5,316 14 0   | 5 9 3      |
| Lackanore     | 83           | 508 16 0     | 6 1 5      |
| Ballymarragh  | 71           | 354 19 0     | 5 0 0      |
| Crestown      | 47           | 323 15 0     | 7 0 0      |
| Ballynacorney | 18           | 104 8 0      | 5 15 6     |
| Cronbane      | 3            | 91 11 6      | 30 10 6    |
| T. only       | 3            | 91 11 6      | 30 10 6    |
| Ballycoligan  | 8            | 87 12 0      | 10 19 0    |
| Total         | 3724         | £26,164 13 0 | £7 0 6     |

## PRODUCE OF THE PRINCIPAL COPPER MINES OF CORNWALL AND DEVONSHIRE, FOR THE QUARTER ENDED SEPTEMBER 30, 1851.

| Mines.                         | Ticketings. | Tons. | Amount.       | Average Price. |
|--------------------------------|-------------|-------|---------------|----------------|
| Devon Great Consols.           | 3           | 4875  | £28,394 12 6  | £5 16 6        |
| Par Consols.                   | 6           | 1774  | 12,014 3 6    | 6 15 5         |
| Carn Brea                      | 3           | 1813  | 10,097 9 6    | 5 10 4         |
| Threorff                       | 3           | 2041  | 8,783 15 6    | 4 6 0          |
| Consolidated Mines             | 4           | 1733  | 9,956 19 0    | 4 19 1         |
| United Mines                   | 3           | 1812  | 8,880 17 6    | 4 14 9         |
| North Roskear                  | 3           | 1408  | 8,304 14 0    | 5 17 11        |
| Wheal Buller                   | 3           | 1505  | 7,844 15 6    | 5 4 2          |
| Wheal Basset                   | 3           | 1173  | 7,348 5 0     | 6 5 4          |
| Wheal Caradon                  | 3           | 962   | 6,786 0 0     | 7 1 1          |
| Wheal Croft                    | 6           | 1231  | 6,329 13 6    | 5 2 8          |
| Wheal Seaton and Penryn        | 3           | 1256  | 6,088 4 6     | 4 16 6         |
| South Wheal Francis            | 3           | 661   | 5,784 11 0    | 8 15 0         |
| North Pool                     | 3           | 1392  | 4,988 11 0    | 3 11 9         |
| South Caradon                  | 3           | 697   | 4,987 8 6     | 7 3 1          |
| Travaleigh                     | 2           | 769   | 4,950 4 6     | 6 8 9          |
| Perran St. George              | 2           | 1368  | 4,857 11 6    | 3 11 0         |
| Alfred Conyola                 | 3           | 635   | 4,431 10 0    | 7 0 0          |
| Trevellick and Newcorker       | 3           | 1238  | 4,317 0 0     | 3 10 6         |
| Wheal Friendship               | 3           | 642   | 3,918 15 6    | 6 2 1          |
| South Toluca                   | 3           | 605   | 3,752 14 0    | 6 4 4          |
| Bedford United                 | 3           | 428   | 2,701 13 0    | 6 6 3          |
| Levant                         | 3           | 316   | 1,807 11 0    | 5 14 1         |
| Phoenix Mines                  | 1           | 150   | 1,625 9 0     | 10 16 8        |
| Treleigh                       | 3           | 282   | 1,531 14 0    | 5 8 8          |
| Conduarow                      | 1           | 263   | 1,441 18 0    | 5 9 8          |
| East Wh. Cro. & Dade, &c.      | 1           | 363   | 1,438 18 0    | 4 0 0          |
| Wheal Ag. & Camborne Vein, &c. | 1           | 372   | 1,308 9 6     | 3 11 8         |
| Wheal Ag. & Camborne Vein, &c. | 1           | 180   | 1,147 14 0    | 6 1 4          |
| East Pool                      | 1           | 353   | 1,101 9 0     | 3 2 4          |
| Poldice                        | 2           | 208   | 982 9 0       | 4 14 5         |
| West Povey Consols.            | 2           | 172   | 897 4 0       | 5 4 3          |
| West Wheal Providence          | 2           | 83    | 897 2 6       | 10 16 1        |
| Holmbush                       | 1           | 152   | 873 12 0      | 5 15 0         |
| Wheal Trevellick               | 1           | 140   | 865 1 0       | 6 3 7          |
| Wheal Valley                   | 1           | 226   | 798 8 0       | 3 10 4         |
| Wheal Elton                    | 2           | 260   | 798 8 0       | 5 13 6         |
| East Wheal Leluan              | 2           | 260   | 694 10 0      | 2 13 6         |
| Wheal Trevellick               | 2           | 245   | 662 17 0      | 2 14 1         |
| Trevellick and North Barrier   | 1           | 265   | 629 16 0      | 2 7 6          |
| Cook's Kitchen                 | 2           | 114   | 582 13 6      | 5 1 7          |
| Callington                     | 1           | 109   | 532 10 0      | 5 6 3          |
| Wheal Clifford                 | 2           | 85    | 457 9 0       | 5 7 6          |
| Carn and Begawan               | 2           | 145   | 445 8 0       | 3 1 4          |
| Wheal Conyola                  | 2           | 53    | 414 14 0      | 7 16 6         |
| Wheal Conyola                  | 2           | 245   | 414 14 0      | 1 14 0         |
| Wheal Conyola                  | 1           | 85    | 407 0 0       | 4 8 0          |
| Dolcoath                       | 1           | 65    | 404 0 0       | 6 2 6          |
| Wheal Wheal Jewell             | 1           | 61    | 396 10 0      | 6 10 2         |
| Wheal Mary (Redruth)           | 2           | 91    | 392 11 6      | 4 5 3          |
| Wheal Unity Consols.           | 1           | 89    | 363 1 0       | 4 1 7          |
| Gammona                        | 1           | 48    | 303 12 0      | 6 8 8          |
| Carnell                        | 1           | 65    | 303 6 0       | 4 13 3         |
| Pollard                        | 1           | 109   | 277 19 0      | 2 11 0         |
| St. Ives Consols.              | 1           | 35    | 228 19 6      | 6 13 8         |
| Wheal Seaton                   | 1           | 55    | 198 0 0       | 3 8 4          |
| Wheal Al. & Consols.           | 1           | 53    | 193 9 0       | 3 12 9         |
| Wheal Maiden                   | 2           | 33    | 183 6 0       | 5 10 11        |
| Tremack and Bosence            | 1           | 25    | 170 0 0       | 6 16 0         |
| Cross Brea                     | 1           | 40    | 168 0 0       | 4 4 0          |
| Trevellick Consols.            | 1           | 20    | 165 10 0      | 8 6 0          |
| Wheal Basset                   | 2           | 31    | 162 0 0       | 5 4 6          |
| Hawk's Point                   | 1           | 51    | 156 15 0      | 3 1 6          |
| Wheal Yvyra                    | 1           | 30    | 139 15 0      | 4 13 4         |
| Wheal Yvyra                    | 1           | 38    | 134 18 0      | 3 11 0         |
| Wheal Crobar                   | 1           | 34    | 132 12 0      | 4 0 0          |
| Copper Bottom                  | 1           | 31    | 124 15 6      | 4 0 8          |
| St. Aubyn and Gylis            | 1           | 19    | 122 11 0      | 6 9 5          |
| Wheal Mary (Redruth)           | 1           | 18    | 117 0 0       | 6 14 5         |
| Pendarras Consols.             | 1           | 30    | 111 0 0       | 3 18 0         |
| Old Wheal Basset               | 1           | 10    | 105 10 0      | 10 11 0        |
| South Toluca                   | 1           | 28    | 94 1 0        | 2 9 6          |
| Camborne Consols.              | 1           | 13    | 92 6 0        | 7 1 6          |
| Gammona and St. Aubyn          | 1           | 30    | 87 0 0        | 2 18 0         |
| Wheal Seaton                   | 1           | 13    | 84 0 0        | 6 9 3          |
| Wheal Seaton                   | 1           | 32    | 80 0 0        | 2 10 0         |
| Wheal Gortland                 | 1           | 12    | 79 9 6        | 6 12 8         |
| Wheal Trevellick               | 1           | 12    | 72 0 0        | 6 0 0          |
| Wheal Trevellick               | 1           | 25    | 63 0 0        | 2 17 7         |
| Wheal Trevellick               | 1           | 12    | 45 12 0       | 3 16 0         |
| Wheal Trevellick               | 1           | 17    | 31 17 6       | 1 17 6         |
| Wheal Trevellick               | 1           | 4     | 26 16 0       | 6 14 0         |
| Wheal Trevellick               | 1           | 9     | 22 19 0       | 2 11 0         |
| Wheal Trevellick               | 1           | 1     | 15 12 0       | 15 12 0        |
| Sundry Slags and Ores          | 4           | 111   | 380 5 6       | 3 8 6          |
| Totals                         |             | 7085  | £193,066 10 6 | £5 6 0         |

The foregoing English and Foreign copper ores were purchased as follows:—

| Companies.       | CORNWALL. | SWANSEA.     | TOTAL. |
|------------------|-----------|--------------|--------|
| Mines Royal      | 2172      | 11,335 11 3  | 652    |
| Vivian & Sons    | 5676      | 28,075 6 4   | 1941   |
| Freeman & Co.    | 4383      | 20,525 3 6   | 469    |
| Grenfell & Sons  | 5130      | 25,142 5 6   | 1314   |
| Crown Copper Co. | 30        | 224 14 6     | —      |
| Sims & Co.       | 5152      | 25,752 9 3   | 1167   |
| Williams & Co.   | 8917      | 56,279 7 3   | 1831   |
| Schneider & Co.  | 2832      | 13,890 15 0  | 455    |
| Mason & Co.      | 2195      | 11,631 13 0  | 77     |
| English Cop. Co. | —         | —            | 1468   |
| Brit. & For. Co. | —         | —            | 367    |
| Low's Patent Co. | —         | —            | 867    |
| Bankart & Co.    | —         | —            | 618    |
| Totals           | 36457     | 193,066 10 6 | 11066  |

## LEAD.

The total amount of sales of lead ores by public ticketing and private sale, of which we have received the particulars during the past quarter, has been 8702½ tons, realising 109,682. 10s. 3d., being an increase over the quarter ended 30th June last of 372½ tons, and 4961. 19s. 8d. The above quantity of ores was raised from the following mines:—

| Mines.                 | Tons. | Amount.       |
|------------------------|-------|---------------|
| East Wheal Rose        | 1202  | £16,335 5 0   |
| Liaburne               | 804   | 8431 7 0      |
| Mary Ann               | 361   | 6913 4 6      |
| Tredway                | 274   | 5375 16 0     |
| Foxdale                | 450   | 4956 15 0     |
| Tamar                  | 265   | 4834 2 6      |
| Westminster            | 409   | 4441 2 6      |
| Laxey                  | 200   | 3705 0 0      |
| Newtonards             | 340   | 3474 10 0     |
| Goginan                | 230   | 3283 2 6      |
| Mess-y-safn            | 303   | 3282 9 0      |
| Callington             | 135   | 2226 7 6      |
| Maehyall               | 178   | 1904 16 0     |
| Pen-y-henblas          | 17    | 1802 6 6      |
| East Tamar             | 144   | 1832 2 0      |
| Cwmystwith             | 170   | 1754 15 0     |
| Black Craig            | 178   | 1666 10 6     |
| Maesyrwddu (Talargoch) | 150   | 1685 6 6      |
| Deep Level (Halkin)    | 156   | 1623 12 0     |
| Court Grange           | 107   | 1595 0 0      |
| Wheal Golden           | 106   | 1313 0 0      |
| Haroldfoot             | 115   | 1288 7 6      |
| Ally-y-Grib            | 115   | 1270 1 0      |
| Calnamore              | 120   | 1199 0 0      |
| Merilyn                | 105   | 1170 0 0      |
| Trehane                | 56    | 1160 12 0     |
| Llanes                 | 92    | 1019 4 0      |
| Bryntall               | 100   | 985 0 0       |
| South Tamar            | 60    | 979 10 0      |
| Roughtangill           | 87    | 948 9 3       |
| Talargoch              | 80    | 913 3 3       |
| Pen-y-friith           | 77    | 894 19 6      |
| Talacre                | 72    | 835 19 0      |
| Halkin                 | 76    | 809 4 0       |
| Nantes                 | 80    | 772 7 6       |
| Hendre                 | 76    | 771 5 0       |
| Great Wheal Badden     | 60    | 769 8 0       |
| Milw                   | 70    | 764 0 0       |
| Lloc                   | 78    | 755 14 0      |
| Jamala                 | 90    | 737 0 0       |
| Drigith                | 69    | 714 5 0       |
| Pen-y-mwyn             | 70    | 705 0 0       |
| Shallie                | 44    | 691 0 0       |
| Daren                  | 45    | 555 12 6      |
| Stronlan               | 50    | 530 0 0       |
| Glenmull               | 53    | 496 7 6       |
| Llwynmales             | 40    | 492 0 0       |
| Wheal Consols          | 30    | 466 7 6       |
| Holmbush               | 30    | 464 0 0       |
| Wheal Adams            | 50    | 456 0 0       |
| Pentire Glaze          | 31    | 444 6 6       |
| Cas-conroy             | 34    | 425 0 0       |
| Aclon                  | 35    | 399 0 0       |
| Bwlch Gwyn             | 30    | 315 0 0       |
| Arkansas               | 13    | 254 3 0       |
| Cedra Lys (Talargoch)  | 18    | 222 8 6       |
| Apple Rock             | 10    | 213 0 0       |
| Bodolion Park          | 10    | 201 15 0      |
| Grogwinlon             | 20    | 199 5 0       |
| Carthow Consols        | 20    | 192 0 0       |
| Tregordon              | 5     | 142 4 6       |
| Dyffryn                | 12    | 120 12 0      |
| Bronfford              | 10    | 108 15 0      |
| Montgomery             | 10    | 101 5 0       |
| Fenrhil                | 10    | 87 15 0       |
| Deltamile              | 3     | 28 16 0       |
| Totals                 | 8702½ | £109,682 10 3 |

The above lead ores were purchased as follows:—

| Companies.              | Tons. | Amount.       |
|-------------------------|-------|---------------|
| Wheal, Parker, and Co.  | 2222  | £26,265 3 0   |
| Newton, Keates, and Co. | 1896  | 21,581 9 3    |
| Sims, Williams, and Co. | 1039  | 13,644 15 9   |
| Thos. Somers and Co.    | 710   | 11,293 10 6   |
| Tamar Smelting Company  | 467   | 8,465 11 3    |
| Penther Company         | 358   | 7,334 12 0    |
| Locke and Co.           | 335   | 5,843 7 0     |
| Michael and Son         | 312   | 3,916 17 6    |
| Mather and Co.          | 285   | 3,716 19 0    |
| Eylon and Co.           | 326   | 3,706 16 0    |
| Mr. Treffry's executors | 152   | 1,883 6 0     |
| Pontifex and Co.        | 90    | 1,012 10 0    |
| Private sales           | 141   | 1,734 13 0    |
| Totals                  | 8702½ | £109,682 10 3 |

## TIN.

The only account sales of black tin during the quarter, of which we have been able to obtain any information, is 183 tons 9 cwt. 0 qrs. 2 lbs., realising 8802. 13s. 8d., being not one-half the quantity which we recorded as sold in the quarter ended 30th June last. Indeed, the particulars which by all the means in our power we are able to obtain, are of such a meagre description, and there appears such a growing desire to keep all transactions as secret as possible, that we give the details more as a matter of form than as anything to be relied upon for correctness; and as to the amount, it must not be taken even to be an approximation to the general business done. The amount given below is but a fraction of the quantity raised, which is generally estimated to average about 3000 tons per quarter, from about 100 mines, the principal portion of which being sold by private bargain, there is no possible means of getting at correct returns. The above quantity of ores was raised and sold from the following mines:—

|                              |      |    |    |    |   |       |    |   |
|------------------------------|------|----|----|----|---|-------|----|---|
| Drake Wall's .....           | Tons | 38 | 5  | 0  | 0 | £1843 | 7  | 7 |
| Poborro .....                | 30   | 0  | 0  | 0  | 0 | 1422  | 13 | 6 |
| Lewis Mines .....            | 25   | 3  | 24 | 0  | 0 | 1240  | 11 | 3 |
| Georgia Consols .....        | 23   | 10 | 23 | 0  | 0 | 1176  | 7  | 6 |
| Threorff .....               | 22   | 0  | 0  | 0  | 0 | 940   | 10 | 0 |
| R. H. Hill .....             | 16   | 0  | 0  | 0  | 0 | 789   | 0  | 0 |
| Weland Consols .....         | 6    | 10 | 0  | 0  | 0 | 327   | 17 | 6 |
| Boscawen .....               | 5    | 17 | 3  | 25 | 0 | 252   | 1  | 1 |
| East Crowndale .....         | 6    | 0  | 0  | 0  | 0 | 277   | 10 | 0 |
| Mineral Court .....          | 4    | 1  | 2  | 15 | 0 | 213   | 13 | 6 |
| Mill Pool .....              | 2    | 18 | 1  | 2  | 0 | 194   | 6  | 6 |
| Wneal Ruth .....             | 1    | 4  | 0  | 11 | 0 | 61    | 7  | 0 |
| Lamberough Wheal Maria ..... | 1    | 3  | 3  | 13 | 0 | 48    | 12 | 0 |
| Wneal Trescoll .....         | 0    | 14 | 0  | 24 | 0 | 38    | 12 | 3 |
| Totals .....                 | 183  | 9  | 0  | 2  | 0 | £8602 | 13 | 8 |



## Original Correspondence.

## THE IRON TRADE—HOME AND FOREIGN.

SIR.—My attention was recently arrested by a statement of the Birmingham correspondent of a morning paper, to the effect that, from the low prices of the necessities of life, the workpeople in the iron trade were never better off, "whilst the makers are carrying on their works, and doing business at a ruinous loss." Whilst, as far as my limited information goes, I am prepared quite to coincide with these remarks, I conceive that the general notions with respect to the prospects of this important manufacture, and which only could exercise so detrimental an effect as to bring it to that position, are of a much less buoyant character than the actual facts would fairly warrant. The want of sufficient interest, and other circumstances, have for many years prevented my paying that close attention to the statistics connected with the subject, which accuracy of judgment would demand, and in the present instance I am under the disadvantage of compiling this in the absence of some of my collected data, and must, therefore, partially trust to memory. As, however, I feel tolerably confident of the general correctness of my statements, clerical exactness is not very important to the comprehensive view I propose to take of the trade; but it will require a little investigation on the part of your readers to follow out the deductions, time and space do not permit me more clearly to elucidate. Now, it will probably be conceded, that the present make of crude iron (and it is to this description of iron that all the calculations used herein are reduced) in Great Britain, does not exceed 2,200,000 tons. Our exportations for the year, ending Jan. 5, 1851, were 783,000 tons, of all sorts; and this year, judging from the present monthly returns, they will probably reach the large amount of 880,000 tons of every description of iron, which, having reference to the loss of weight sustained in the manufacture, is equivalent to about 1,090,000 tons, or nearly half the production:—the exports for the previous two years being 783,000 and 708,000 tons, respectively; representing 870,000 and 970,000 tons of crude or pig-iron, and showing a progressive increase of about 100,000 tons per annum during the three annual periods.

The make of pig-iron in 1835 was about 1,050,000 tons: the exportation (220,000 tons), reduced as before—270,000 tons; and as the requirements of our railroads at that period would scarcely exceed 100,000 tons (presuming 150 miles to be in progress,—the average mileage granted by Parliament for the three years preceding amounted to 120 miles), there would, therefore, remain 680,000 tons for the ordinary home consumption of the kingdom, irrespective of railroads and their accessories. Now, having a due regard for the various new channels of consumption,—for iron vessels, for architectural, and other purposes, as well as for the vast undoubted increase in the old channels, we shall probably be within the mark in assigning 120,000 tons to represent this augmentation, and in determining the present consumption (with the above limitation) at 800,000 tons.

With respect to our own railroads, 6500 miles have been opened for traffic, representing in crude iron, at 650 tons per mile for all purposes, 4,225,000 tons. Wide differences of opinion will, of course, exist as to the necessary annual allowance for wear and tear of these roads and their accessories; and this difficulty is aggravated in calculation by the diversity of the periods during which they have severally been at work. A rude approximation to the truth is, therefore, all that can be offered; but I propose to estimate it at 3½ per cent. on the crude iron employed in the construction originally, and to allot for that purpose an annual quantity of 140,000 tons during the five years which I intend to embrace in the present investigation.

The next consideration is that of the railroads to be made in Great Britain. By the last parliamentary return which I can at present quote, there were 5450 miles opened for traffic on the 20th June, 1849. Upwards of 1500 more were then commenced, besides 5600 for which Acts had been obtained, but which were not in progress. During the two succeeding years, to the 30th June last, there were opened about 1000 miles, leaving 600 miles of what were commenced in June, 1849, still to be constructed, besides numerous other lines which have been commenced in the interim, either part of the 5600 miles alluded to, or for which Acts have been obtained during the last two sessions. No sane man will argue that the whole of this batch of 5600 miles will be attempted; but without entering minutely into detail, I will assume (and I believe it to be a moderate estimate) that 1750 miles of new railroad, or 350 miles per annum, will be constructed in these islands during the next five years. Of course, taking into account the many new trunks, links, or branches, which any one who has studied the subject must see are even now unprovided for by the Legislature, and which the wants of the several localities imperatively and legitimately require. As a specimen, I would adduce the Worcester and Hereford line to the Staffordshire district, or the Breconshire line to the South Wales.

We have now, therefore, arrived at the following data, and which I assume as sufficing for the coming quinquennial period:—

|  |      |           |
|--|------|-----------|
| Exports (subsequently investigated further) .....  | Tons | 1,090,000 |
| Home railroads—Repairs of lines made and renewals, including engines, trucks, &c. &c. .... | Tons | 140,000   |
| New roads, 350 miles per annum .....   | Tons | 230,000   |
| Home consumption other than railroads .....  | Tons | 800,000   |
| In crude or pig-iron .....   | Tons | 2,260,000 |

And as there is no reason to assume that, at present rates, or even with such a moderate advance as circumstances warrant, there will be any increase of production, the estimated make of 2,200,000 tons is thus fully disposed of.

The exportations seem to present a most perilous feature, nearly approaching half the make, and equalling, in declared value, not far short of 6,000,000 sterling; but I conceive, under the altered policy of the kingdom,—if the world at large is blessed with a continuance of peace, and no ill-omened events occur to mar the prospect, under the verifying influence of the increase in the precious metals, and considering that others of our manufactures depend on foreign markets to a far greater extent (cotton to nearly 30,000,000l.)—that the prospects of our iron trade are neither anomalous or inauspicious. It would undoubtedly be wiser, and its fortunes would be placed on a still more stable basis, ever insuring an adequate return, if those engaged in the trade would unite for the constant regulation of the supply of the raw material in reference to the demand; but with the jealousy, rivalry, and want of mutual confidence which now exists, such an inestimable arrangement is impracticable. Fortunately, however, I think that, at the present juncture, the ordinary course of events will ensure a moderate prosperity, if the ironmasters have only a legitimate confidence in their position, and abstain from the practice of not only selling their iron for no profit, but, in effect, giving their customers, foreigners included, a bonus for taking it. Irrespective of the calculation for the home use of iron taken from present data, an allowance might have been made for the extension of its ordinary uses—the Crystal Palace, for example, the diffusion of the screw principle amongst sailing vessels, the introduction of iron for forming bridge piers, continuous sleepers, and the presumed energy of our agricultural friends in the use of improved implements, have all the same beneficial tendency; truly the "Cetus d'uro est ultima ferro" is no longer a poetic fancy; and even the "wooden" Brunel, who has derived the sobriquet from those perishable fabrics which should never have been allowed to mock the iron districts of Staffordshire, is laggingly, but more generally, using the nobler material,—following the example of the illustrious Stephenson, whose splendid monuments of railroad architecture will remain as adamant, to look down with contempt upon his rival's miserable anachronisms, destined, perchance, to perish ignominiously (like the Newport Bridge) in the flames, or to rot, unregretted, to the earth. But to return to our exportations, the probability of keeping up the amount of which forms so important a feature in our estimate, the more so as undue weight has been attached to the fact of one or two minor markets having been overstocked with our iron. I do not happen to have at hand any recent return of the quantities severally exported to foreign ports; but from the plan of argument I propose following, this lapsus is no great detriment, as I intend to assume that, unless an alteration should take place in the Germanic or American tariffs, or an improbable addition be made to our prices, our old customers for railway material are not likely to take less than heretofore; fortifying that assumption by the notorious energy of construction still going on amongst them, and estimating that, at all events, any hiatus will be more than filled up by the additional requirements, to the consideration of which I am now about to address myself.

Germany, Russia, and the United States have already drawn largely on us for their railroads, and France to some extent, and I do not contemplate any addition; but there has been recently so great a vivification of railroad enterprise in countries where it has hitherto been trivial or dormant—countries, too, where the greater portion of the material will be ob-

tained from ourselves—that it is of great importance to obtain a knowledge of their capabilities and intentions. This letter has already reached a far more unwieldy length than I had contemplated; I must, therefore, assume that your readers have a general knowledge of the subject, and merely give a short summary, with casual allusions to some of the principal lines in the several countries, and brief explanatory memoranda. Some of these countries certainly already figure in the exportations; but to a comparatively trivial amount. I omit Sardinia from the catalogue in consequence, though it is about forming much more important railroads than heretofore, and so also Tuscany. I have included India for 750 miles only, though her wants are likely to be on a more extensive scale—being aware of some previous exports. Altogether (although it may appear arbitrary, and though space prevents my attaching to each name its peculiar reasons) I believe the scheme will not be found unequal to the object I have in view. The list annexed is that of the countries in the above category, with the mileage of railroads, for which I assume they will require iron for the next five years:—

1. Spain .. Miles 500—The Madrid and Irún, Alar and Santander, Madrid and Almansor, with continuation to the sea; Seville and Andujar, Barcelona, to French frontier, Valencia and Grac, &c. (besides one contemplated from Cadix to Jerez, and also one from Madrid to Badajoz), are either commenced, contracted for, or conceded—together about 1000 miles.
2. Portugal .... 100—The only line I am aware of as planned is the Lisbon and Badajoz; but, during five years, surely more may fairly be calculated on.
3. Canada ..... 650—There is now no doubt but that the Halifax and Quebec line, 636 miles long, will be completed under Imperial guarantee; there is also the extension to Hamilton, 600 miles further, besides other branches. There is already a short railroad in Canada.
4. Egypt ..... 100—The line from Alexandria to Cairo (100 miles) is begun. Mr. Stephenson is adopting here the cast-iron sleepers. We may expect a continuation to Suez, and, perhaps, other short lines.
5. Turkey ..... 150—I believe nothing is commenced here, and the line to Orsova only planned (345 miles). A line from Aleppo to the Persian Gulf, for the India route, is within the limits of probability.
6. East Indies .. 750—This mileage is, probably, much within the limits of a fair allowance for India—taking into account what is already done.
7. South America, West Indies, Australia .... } 400  
In Chili railroads have been warmly welcomed. A line from Valparaiso to Santiago (140 miles) is commenced, and one from Valparaiso to Copiapo will be shortly, about 400 miles long. In Australia and the West Indies some railways will also be probably made in the period assigned.
8. Papal States, Naples, Parma, Modena, &c. } 300  
The Papal Government have in contemplation a line from Ancona to Rome, and Ancona to Bologna (guaranteed 5 per cent.) 100 and 120 miles respectively. Part of a proposed line between Monterra and Pistoia, and branch to Ferrara, under Austrian auspices, will cross Modena and the Papal States, about 120 miles long. The Austrian Government is also concluding a treaty with Piedmont for a line from Turin to Milan; but this, as well as several other Piedmontese lines (to Chombery, &c.), I omit, for the reasons previously stated.
9. Norway and Sweden .... } 150  
A line from Christiania to Lake Moysen is contracted for, under Imperial guarantee. It cannot be more than 100 miles more; not too much to estimate for five years in the two countries.
10. Denmark and Holstein .... } 100  
Some years since it was calculated there was legitimate room for 700 miles of railway in this district. It is understood that the Government is extremely anxious to forward railroads. There is a line from Altona to Kiel.
11. Switzerland .. 150—A line is almost certain to be made between Chombery and Geneva (to join the Turin line, over Mount Cenis), about 60 miles long. About 400 miles further are only in embryo, having been recommended and surveyed by Mr. Stephenson.

Now, here are 3350 miles of railroad (presuming any deficiency in one country to be made up by the others), representing, at a low average, 1,250,000 tons of crude iron (a lower standard being taken for colonial, foreign, and continental, than for English roads), likely to be constructed in five years, giving 250,000 tons per annum to supply any presumed falling off in exports, as before estimated. The natural deduction, therefore, from all these figures is, that there is no sufficient reason for the present ruinous rates, and it is the fault of the ironmasters alone that their property is so fearfully depreciated. I shall not occupy more space by recapitulating, or condensing, the reasoning; but conclude, with a hope that a brighter prospect is dawning upon them.—ADELOS: Oct. 2.

P.S. By way of comparison with the British home consumption of iron—taken at 1,170,000 tons—I have endeavoured to investigate that of the United States. Last year they imported 347,000 tons of all descriptions of iron, equal to 430,000 tons of crude iron. Some years since, in the zenith of their trade, their make was estimated to reach 700,000 tons. In the present paralysed state, probably 570,000 tons would be a fair approximation to it, so that their consumption would reach 1,000,000 tons, which presents a reasonable comparison to our own—allowing for our greater population and more advanced state of scientific civilisation.

Recent advices from the United States represent the prosecution of new railways as going on very vigorously.

## RAILWAY CHAIRS.

SIR.—You have on various occasions obligingly noticed in your Journal the iron block chair for railways, patented by me some six years ago, since which time several other patents have been taken out for railway chairs, essentially similar in principle, and which have engaged considerable and well-merited attention by parties interested in railway formation. When I first brought an entire iron construction before the public, there were reasons for the scheme not being acceptable; amongst the rest, overcoming the prejudice in favour of the old mode of formation, with stone and timber. Time, however, has shown that my opinion as to the adoption of iron alone has not been either visionary or impracticable: perhaps the strongest inducement for this change of opinion has been the fact that an iron formation of railway conduces not only to the interest of directors who adopt it, but also to the more important assurance of safety to the public; and, furthermore, from the economy in construction, and permanency of its character, coupled with the later acquired experience of practical and scientific men, it being now proved, without a doubt, that a line formed entirely of iron can be made with greater prospective benefit from its durability, be permanently kept up at a less outlay, and avoid the inconvenience and danger to the traffic of the line when renewing the sleepers whilst in operation. The iron block chairs of my construction have now been in use for several years; and early in the present year a further satisfactory application of them was made. The block chairs, where laid down, have been subject many times during the day to the constant passing over the line, at high velocities, of both heavy goods and passenger trains; they have not been found to vary in the slightest degree, but maintained a firm, immovable position, without the least perceptible deviation by lateral pressure or otherwise, and without the corresponding opposite chairs being secured by transverse tie rods to preserve the parallelism of the rails, which effects a considerable saving of original cost per mile. As the expense of forming one mile of single way of iron alone has been given lately in your Journal, permit me to subjoin the following estimate of laying one mile of single railway with the iron block chairs above alluded to, compared with the expense of a similar length of way formed with wooden sleepers:—

|   |            |
|---|------------|
| 117 tons of rails, 75 lbs. per yard, at 54. 5s. per ton .....                                       | £614 5 0   |
| 132 tons of block chairs (viz., 1320 chairs, 1 cwt. each, laid 4 feet apart), at 80s. per ton ..... | 528 0 0    |
| 3520 wooden keys, at 1d. each .....   | 14 13 4    |
| Total .....   | £1156 18 4 |

The expense will be proportionately increased if the chairs are laid 3 feet apart.

The cost per mile of laying a single line of railway with wooden sleepers is as follows:—

|   |           |
|---|-----------|
| 117 tons of rails, 75 lbs. per yard, at 54. 5s. per ton ..... | £614 5 0  |
| 33 tons of cast-iron chairs, at 34. 13s. 6d. per ton .....    | 139 13 0  |
| 1760 best Baltic wooden sleepers, at 4s. each .....           | 352 0 0   |
| 7040 iron spikes, at 2d. each .....                           | 58 13 4   |
| 8520 wooden keys, at 1d. each .....                           | 14 13 4   |
| For one mile of single way .....                              | £1179 4 8 |

Relying on the accuracy of the foregoing estimates, a single line of way for one mile, constructed with the iron block chairs, will cost 1156l. 18s. 4d. Each chair weighing 1 cwt., at 80s. per ton, placing them 4 ft. apart from centre to centre, which from the length of bearing on the chairs—namely, 20 inches over and upon each—leaves a space of 28 inches of unsupported rail, which is less than the existing practice of sleepers laid 3 feet apart. The expense of laying one mile of single line of way with wooden sleepers amounts to 1179l. 4s. 8d., which gives 22l. 6s. 4d. in favour of the iron block chairs, without regarding the constant process of decay the sleepers are constantly undergoing, and the daily attention required of renewing them, which occasions a heavy item of outlay in supervision, labour, and material. There can be no question, therefore, as to the superiority of iron formation; how far the iron block chairs, which I have called your

\* Since these estimates were made, I have received a tender to cast and deliver the block chairs at 77s. 6d. per ton.

attention to, possess superior merit, must abide the ordeal of those who are best qualified to appreciate them.

I may, however, be allowed to claim the first introduction to notice of the iron block chairs, in lieu of timber and stone, which have the qualification of being simple in construction, incur no expense in fitting, require neither screw, bolt, or bar, in their application, but only the wooden wedge to retain the rail in its position; further, that these chairs have been tested and found by experience to answer well, are moderate in cost, readily adjusted on the line, and as readily and expeditiously removed or replaced when necessary. I have already trespassed so much that I refrain at present from sending you a description of my patent platforms, chairs and rails, so constructed as to form together one united continuous line of iron railway.—S. REED: Newcastle-on-Tyne, Sept. 30.

## NEW PLAN FOR OBTAINING SULPHUR.

SIR.—The United Kingdom has an abundant store of metallic sulphurets, yet still the manufacturers who consume brimstone draw their chief supply from foreign countries. Your able correspondent, Mr. Birkmyre, is indefatigable in his exertions to rouse the Cornish mine proprietors to the importance of this subject, and commence active operations. I notice in some late Numbers of your Journal the formation and progress of a company got up by Mr. Todd for carrying out improved modes of treating certain minerals. Although Mr. Todd does not begin as he ought to do, that is by separating and collecting the sulphur, I wish him success, as such may induce other parties to get up a second company purposely to manufacture sulphur. About a dozen years ago I devised different modes of procuring sulphur from the metallic sulphurets, but unfortunately these, and many other useful inventions, have been kept in abeyance. By some strange fatality, I have hitherto been at work with pigeons on one side, and crows on the other; my plans have been frustrated, and my exertions rendered abortive between imbecility and knavery. Whenever I reflect upon the subject of the first sentence in this letter, a sense of mortification passes through my mind. In the hope that the miners of Cornwall, Ireland, Wales, the Isle of Man, and other districts, will at no distant period see their true interests, and exert themselves to promote them. I give a brief outline of a plan for obtaining sulphur, being a modification of different plans which I have tried, and which I feel confident will prove easy in practice, while as simple and economical as any likely to be devised. Two separate portions of sulphurets are to be simultaneously acted upon, the one by heated air, the other by heated steam. The requisite heat will probably be about 500° Fahr.; sulphurous acid will proceed from one, sulphuretted hydrogen from the other. As arsenic is generally present, its separation is essentially necessary, and arrangements must be made accordingly. For this purpose I propose, what I have already described in the *Mining Journal*, that the sulphurous vapours shall be conveyed through flues or chambers to such an extent that they may be cooled down to the point at which the whole of the arsenic will condense. To economise space, and facilitate the collection, I recommend a series of ascending and descending flues or chambers; beyond the point at which all the arsenic will have condensed, the sulphurous acid and sulphuretted hydrogen are to be brought to meet in a chamber, into the upper part of one side of which cast-iron pipes are to be inserted in a row, slanting downward outside. These pipes are to be heated at their upper ends by an external fire, up to about the subliming point of sulphur; they must be of such a length that the lower extremity will be kept at, or a little below, the melting point of sulphur, where the sulphur will condense, and moulds may be placed to receive it in fusion. My sight having failed me of late obliges me to be concise in my remarks, but I shall be glad to go into details if required, either publicly through the medium of the columns of your Journal, or personally. A large quantity of sulphur is used for decomposing salt to form the alkalies; for this purpose I have been long engaged with a plan for forming sulphate of ammonia, still a great quantity of sulphur being required for other purposes, a sulphur works would answer, all the metals being left, without any admixture in the residue, and in a forward state for separation and reduction.—T. H. LEIGHTON: Sept. 28.

## ALCHYMICAL SCIENCE.—No. II.

SIR.—The advent of new views of natural philosophy, and the abrupt promulgation of their substantive and derivative facts, entail on their promulgators such a host of hostilities, prejudices, and obstructions, as to convert the proper method of fame into discouragement from the pursuits of their otherwise honourable course.

There is really very little difference, in effect especially, between this antagonistic feeling and expression of old notions and customs against whatever is new and startling in character, and the hierarchical prejudice of and enmity to the Copernican philosophy in the hands of Galileo and his compeers; and it may be wise on my part to break the force of the serious onslaught preparing against the subject of these papers to indulge in a little elucidative digression during the time necessary for perfecting some startling results of secondary and tertiary mineralisation now in course of development, which, if brusquely introduced to public inspection, might either be subject to illiberal criticism or be declared scientifically chaotic. Nos. II. and III. will, therefore, partake of this intercalary nature, and disclose to your readers some of those peculiar and anomalous facts in this connection, which have sorely perplexed and continue to disturb the propriety of the scientific world.

Many of your readers are aware that the noble name of CAVENDISH formerly figured in the walks of chemical research, of whose existence and patient assiduity we have a mighty memorial in his extant contributions to the pages of the *Philosophical Transactions*, which evince an unwearied devotion to the pursuit of the noblest of all the sciences, in preference to the luxuries which would otherwise have been his lot, had his choice lain in this more popular direction. It was about the time of the discovery of PALLADIUM that a stranger, after having deposited a few ounces of a metallic substance with an elderly lady, near Seven Dials, proceeded to advertise its sale under the denomination of palladium, which excited considerable curiosity amongst the savans of the day from the large supply and comparatively diminutive price; and, amongst others, Hatchett procured a specimen, and upon examination gave it as his opinion that it was really palladium, as having the colour, lustre, infusibility, density, resistance to decomposition, and, in short, all the leading features and properties of the new metal, just previously discovered, and then very scarce, and inordinately expensive.

Cavendish was also induced to procure the metal, and test the authenticity of this account; and after having examined it, and published his researches thereon, which also established its identity, he became induced to question its metallic simplicity.

It is not necessary in this recital to exhibit the circumstances that led to these suspicions—for a detail of which, as well as for the elaborate researches, which would not in the present day be a disparagement to a LAURENT, that led to the ultimate result, the reader is referred to the numerous contributions on this topic in the scientific journals and annals of the particular time. Suffice it to say, that after difficulties that would have tired the patience of any ordinary analyst, Cavendish discovered that this so-called metal could be produced by an alloy of mercury and platinum.

This alloy, simulating in almost every particular the now well-known, and so called, simple body, palladium, has, when composed of 33·3 parts of Hg. and 66·6 of Pl., a specific gravity of 11·500, is soluble in nitric acid—is precipitated from all its solutions as an alloy, resists all ordinary means of decomposition, and even of voltaic polarity—is permanent in the fire at all possible temperatures, fusing at a white heat into a metallic button. In fact, Cavendish never succeeded in resolving this compound into mercury and platinum; but succeeded in imitating it by the union of its elementary parts!

Having now given the history of this singular compound metallic body, I shall speak of some of its properties, as capable of throwing considerable suspicion on the identity of many other metallic bodies, and at least of creating toleration and favour for this long abeyant original of the science of chemistry. When the proportion of mercury is diminished to one-fourth, and that of platinum increased to three-fourths, the density of the alloy is augmented from 11,500 to 12,500; and it therewith acquires the property of resisting the action of nitric acid, but yielding to that of NO<sub>2</sub> HCl. But the most singular, and in this connection instructive feature, consists in the great increase of thermic compendency which attends the formation of this simulative metal. In the specific gravities of 11,500 and 12,500, attendants upon the constitutions of this allodial metal, we have a co-efficient of density, less than that of either of its components—mercury being 13,500, and platinum 20,500; and hence THERMON in capacity of Thermosphere, must have become largely associated with the component metals to accommodate the diminished specific gravity and large increase in the numeral co-efficient of the specific heat of the allodial body; and



hence it is to the ingredient, THERMION, that all the disguised metallic properties are owing; and if the mere constituent addition of the matter of heat in a material and permanent form can thus almost make a new metal, out of the materials of two other metals, need we be surprised on being assured that in many other cases the change and conversion is not almost but, in reality, complete?

I might greatly dilate upon the importance of the facts here detailed, and show how powerfully they concur to induce the full belief in the rationality of the avocations, if not professions, of the glorious company of the alchemists, even in the pursuit of the philosopher's stone, as an inductive medium to metallic transmutation, whose names even, were it not for the apparent importance of their professions, would, with their labours, have long since passed away; but I shall, for the present at least, avoid all such dilatation of the theoretical part of the study, and leaving it to the care of your numerous readers, induce in their minds, if not a disposition to aid in this important pursuit of knowledge, at least tolerate as rational the labours and contributions of others.

Wm. RADLEY, Ch. E.  
Brixton, Oct. 4.

#### PRACTICAL MINING—GERMAN SCHOOLS.

SIR,—I am extremely pleased with the remarks in your last Journal on the proposed mining school. If we are to have a practical school, there ought to be practical men in the body, otherwise it cannot lead to useful purposes. We know what the engineering and continental schools have done, and we have an excellent example in Mr. Faber's letter what we are to expect from the so-called schools of mining—the production of vain bubbles at so much per head, the capacity weakened in the exercise of common sense and practical ideas. If our mining school propagates such absurdities as those brought forward by your correspondent, a friend has suggested that Battersea-field will serve quite as well as any other field for the exercise of the students; but I sincerely trust that Englishmen have too much practical sense to encourage anything short of positive knowledge in such an establishment.

We want local schools, where young men may be taught daily by practical teachers, as the majority of our miners, young and old, can ill afford to leave their employment, much less to pay a high sum, to get their heads filled with such visionary notions as those of Mr. Faber. It is amusing to hear the self-sufficiency and presumption of some men called teachers, or professors, scarcely knowing the distinction between porphyry and granite, or even a copper mine and a colliery, yet endeavouring to force their absurdities on the public, in contradiction to all experience and common sense. After the masterly letters of Mr. David Mushet, Mr. Evan Hopkins, and others, I little expected to find such a letter as that of Mr. Faber's in your Journal. It serves, however, as a glaring proof of the injury done to the minds of young men by sending them to such schools.

I trust, Sir, that as Englishmen have hitherto succeeded, and have obtained celebrity for their works, in consequence of their studying the laws of Nature, aided by the instruction of efficient men, that the schools of industry will be founded on similar natural principles, so as to render them of real practical utility and benefit to the rising generation of miners.

Truro Sept. 26.

AN OLD MINER.

#### REAL ELEMENTS OF NATURE.

SIR,—Acquainted with Mr. Rogers, in your columns, as a practical writer, I read his introduction with due attention, and am disappointed to find him stop just at the beginning for proofs of the elements now acknowledged. He need not be told that we term the metals, &c., "elements" only in a limited sense—few, if any, chemists believing that we have reached, or even approached, the ultimate point of decomposition, or that the bodies now regarded as simple are really the ultimate elements of nature; but rational and inductive chemistry does not allow us to regard a substance as compound until we have evidence, analytic or synthetic, of its composition. To take examples from Mr. Rogers's own writings, he is well acquainted with the existence, forms, and qualities of iron and carbon. He knows that they can combine, and can also unite with other bodies, forming a great variety of compounds; but if he knows further how to decompose them, or to form them from substances not containing them ready formed, he has made a great and most valuable advance in chemical science.

After this compliance with his desire, let us hope he will proceed with his exposition. If it is really based upon fact and experiment, it will be hailed throughout the scientific world; but if, as rather appears from what he has so far given us, it is only a hypothetical anticipation of future experiments, unknown how or when, it remains to be seen what benefit he can show from his speculations.—J. PRIDEAUX: Plymouth, Oct. 2.

#### RAILWAY ACROSS THE BRITISH CHANNEL.

SIR,—In your Journal of last week you promulgated my novel theory of crossing the British Channel by means of a railway; but as the statement was headed "Balloon Railways," it has led some scientific persons to suppose that balloons were a means of carrying out this theory, and I wish it to be known that the only connection one theory has with the other is, that the proposer of this new plan for crossing the British Channel was the same person who originated balloon railways, as stated to be now carrying out in America. In explaining this matter to your readers, you will much oblige yours, &c.—J. BROWN: Great Portland-street, Oct. 3.

#### STEAM TO INDIA, CHINA, &c.—Particulars of the regular MONTHLY MAIL STEAM CONVEYANCE.

AND OF THE ADDITIONAL LINES OF COMMUNICATION NOW ESTABLISHED BY THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY, with the EAST, &c. &c. The Company's boats PASSENGERS, and receive GOODS and PARCELS, as heretofore, for CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG KONG, by their steamers, starting from SOUTHAMPTON on the 20th of every month, and from SUEZ on or about the 10th of the month.

One of the Company's first-class steamers will also be dispatched from Southampton for Alexandria, as an extra ship, on the 3d of November next, and of alternate months thereafter, in combination with extra steamers, to leave Calcutta on or about the 20th October and 20th December. Passengers may be booked, and goods and parcels forwarded by these extra steamers to or from SOUTHAMPTON, ALEXANDRIA, ADEN, CEYLON, MADRAS, and CALCUTTA.

BOMBAY.—The Company will likewise dispatch from Bombay, about the 1st November next, and of every alternate month thereafter, a first-class steam-ship for ADEN, to meet there the extra ship between Calcutta and Suez; and at Alexandria one of the Company's steam-ships will receive the passengers, parcels, and goods, and convey them to Southampton, calling at Malta and Gibraltar.

But PASSENGERS, PARCELS, and GOODS for BOMBAY and WESTERN INDIA will be CONVEYED THROUGHOUT from SOUTHAMPTON in the Mail steamers, leaving Southampton on the 20th of October, and of alternate months thereafter, and the corresponding vessels from Suez to Aden, at which latter port a steam-ship of the Company will be in waiting to embark and convey them to Bombay.

Passengers for Bombay can also proceed by this Company's steamers of the 29th of the month to Malta, thence to Alexandria, by Her Majesty's steamers, and from Suez by the Honorable East India Company's steamers.

INTERMEDIATE.—MALTA: On the 20th and 29th of every month.—CONSTANTINOPLE: On the 29th of the month.—ALEXANDRIA: On the 20th of the month. SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th, 17th, and 27th of the month.

N.B.—Steam-ships of the Company now ply direct between Calcutta, Penang, Singapore, and Hong Kong, and between Hong Kong and Shanghai.

For further information and tariffs of the Company's recently revised and reduced rates of passage-money and freight, and for plans of the vessels, and to secure passages, &c., apply at the Company's offices, No. 122, Leadenhall-street, London; and Oriental-place, Southampton.

#### TO MINE PROPRIETORS, WATER-WORKS AND LAND-DRAINAGE COMPANIES, CONTRACTORS, MANUFACTURERS, AND OTHERS.

#### GREAT BRITAIN STEAM-SHIP.

THE PROPRIETORS of this SHIP desire TENDERS for the WHOLE (or for any definite section, that would not prejudice the entirety of the remainder) of her STEAM MACHINERY, as originally constructed, consisting of FOUR 88-inch CYLINDERS, of 6-foot stroke, with pistons and rods, air-pumps and condensers, connecting-rods and guides, and all the detail of nozzle and valve gearing, necessary to render each pair of cylinders complete in themselves, from the pistons to the crank-pin.

Apply to Mr. Croome, civil engineer, or Capt. Mathews, on board the vessel, Sandon Graving Dock; or Gibbs, Bright, & Co., Liverpool.

#### THE PATENT WATER-BALLAST STOWAGE BAGS

AND PUMPS HAVING BEEN TESTED, and met the approval of practical men, the Public is respectfully informed that all is now prepared for FITTING UP SHIPS, by application to Mr. KIRK, at the WORKS, GIBSON'S BUILDINGS, NEWCASTLE-UPON-TYNE, where a pamphlet and illustrations may be obtained by, or forwarded to, parties, and where all inquiries will be fully replied to.—Newcastle-upon-Tyne, Aug. 15, 1857.

#### FOR THE SHOOTING SEASON, 1851.

DEANE, ADAMS, & DEANE, GUN-MAKERS to H.R.H. PRINCE ALBERT, beg respectfully to call the attention of SPORTSMEN to their late IMPROVEMENTS in GUNS, PISTOLS, and RIFLES, which may be seen and tested daily, with a large assortment of their best town-made GUNS, at the MANUFACTORY, No. 30, KING WILLIAM STREET, LONDON-BRIDGE.—August 7, 1851.

\* Sporting ammunition of the best quality on the lowest terms.

#### ED. J. DENT has REMOVED from 82 to 61, STRAND

being 21 doors nearer to Charing-cross, and directly opposite Bedford-street, and soliciting INSPECTION of his extensive STOCK of CHRONOMETERS, WATCHES, and CLOCKS, as above; also at No. 33, COCKSPUR-STREET, and No. 34, ROYAL EXCHANGE (Clock Tower area).

#### REED'S IRON RAILWAY CHAIRS.—(PATENT SEALED OCTOBER 16, 1845).

TO IRONFOUNDERS AND CONTRACTORS.—The continuous IRON RAIL is adapted to the roadway, without being keyed into chairs, which are dispensed with; and the IRON BLOCK CHAIRS, where rails are used, are made to supersede the use of stone and timber, forming an entire PERMANENT IRON RAILWAY. The Chairs have been laid on the Newcastle-upon-Tyne and Carlisle Railway for four years, with perfect satisfaction. Their superiority over other chairs, used in combination with stone and timber, is evident, and have the advantage of expedition in adjustment, economy in price, and unquestionable greater durability.

The above improvement in railways comprises an entire iron construction, and has priority over other patents for a similar formation.

The Patentee is ready to GRANT LICENSES on payment of a moderate tonnage royalty, or will treat for the absolute SALE of the PATENT, with all claims for infringement.—Apply to Mr. S. Reed, Bank-buildings, Newcastle-upon-Tyne.

#### TO IRONMASTERS, RAILWAY DIRECTORS, ENGINEERS, AND FOUNDERS.

THE SUBSCRIBER having been appointed SOLE AGENT in LONDON for the SALE of Mr. MORRIS STIRLING'S PATENT IRON, begs to intimate that he is prepared to SUPPLY Railway Companies, Engineers, and Founders, with the PATENT MALLEABLE and TOUGHENED CAST-IRON, and that all orders addressed to him for these, and also for RAILS, with Hardened Surfaces, shall have his prompt attention.

Specimens of the different Irons shown, and every information afforded, on application. Information as to the terms of License under Mr. Stirling's Patents will be given by the Subscriber, and also by Mr. JEE, C.E., 6, John-street, Adelphi. A. MACNAUGHT, OFFICES.—2, Queen-street-place, Upper Thames-street.

WAREHOUSES.—Paul's Wharf, 25, Upper Thames-street.

#### TO THE MINING AND SHIPPING INTERESTS.

WIRE AND HEMP ROPES.—MANUFACTURED under PATENT GRANTED TO JAMES B. WILSON, HAYDOCK ROAD, WARRINGTON.

Applicable to SHIPPING, INCLINED PLANES, MINES, COLLIERIES, &c.; as also to WIRE CABLES for SUBMARINE, OVERLAND, and UNDERLAND TELEGRAPHS.

Sizes, with comparative weights and strength, as also price per cwt. or fathom, may be obtained on application to the patentee.

All sizes of wire strands, railway signal lines, flat and round copper rope, lightning conductors, window sash lines, &c.—Warrington, July 5, 1851.

#### TO DOCK COMPANIES, WHARFINGERS, COAL, STONE, TIMBER MERCHANTS AND OTHERS.

PATENT STEAM WHIPPING COMPANY.—Messrs. E. & A. PRIOR, the Managers of this Company, are now UNLOADING, by means of an ENGINE, their COLLIERIES in the THAMES, at an average rate of 30 tons per hour, or upwards of two hundred tons per day, and at a considerable reduction in cost.

They have numerous highly satisfactory certificates from captains whose ships they have discharged, and to the owners of which the greatly increased dispatch is obviously a matter of the greatest importance.

The remarkably small dimensions and weight of the engine admits of its being placed on, and removed from, the ship's deck with the greatest facility and dispatch, by means of the barge and derrick. These engines are also thoroughly adapted for unloading in the docks, or for permanent use on board all large ships, where, in addition to working out the cargo, they might be most advantageously used for doing all the other heavy work, such as pumping, lifting the anchor, warping, &c.

This Company are now prepared to contract for the unloading of any quantity of coals, or to grant Licenses for the use of the patent, on application to the managers, Messrs. E. & A. PRIOR, 153, Upper Thames-street, London.

#### GOVERNMENT SCHOOL OF MINES, AND OF SCIENCE APPLIED TO THE ARTS.

Museum of Practical Geology.

The COURSE of STUDY at this INSTITUTION will commence on THURSDAY, the 6th of November, 1851, and the following LECTURES and PRACTICAL DEMONSTRATIONS will be given during the session:—

1. CHEMISTRY, applied to Arts and Agriculture ..... LYON PLAYFAIR, Ph.D., F.R.S.  
2. NATURAL HISTORY, applied to Geology and the Arts ..... EDWARD FORBES, F.R.S.

3. MECHANICAL SCIENCE, with its applications ..... ROBT. HUNT, Keeper of Mining to the Mint ..... Records.

4. METALLURGY, with its special applications ..... JOHN PERCY, M.D., F.R.S.  
5. GEOLOGY, and the practical applications ..... A. C. RAMSAY, F.R.S.

6. MINING and MINERALOGY ..... WILKINSON W. SMITH, M.A.

The fee for the course of two years is one payment of £30; or £20 for each session, from November to August inclusive.

Practical Instruction in the Field, in Geology, Mining, and Palaeontology, is included in the above charges.

Occasional Students may attend separate Courses of Lectures and Field Instruction on payment of the Fees mentioned in the program.

The Laboratories for Chemistry and Metallurgy will be open for the reception of Pupils on payment of £15 for the session of five weeks.

Officers of the Army and Navy, either in the Queen's or the Honourable East India Company's service, are admitted to the Lectures at half the usual charges.

Students who propose to enter with the view of obtaining the Diploma of the Institution, are requested to apply to Mr. Trevellick, at the Museum, from whom the necessary information may be obtained.

H. T. DE LA BECHE, Director.

#### GEOLOGICAL MINERALOGY—KING'S COLLEGE, LONDON.

LECTURES on MINERALOGY, with a view to FACILITATE the STUDY of GEOLOGY, and of the APPLICATION of MINERAL SUBSTANCES in the ARTS. The Lectures will be illustrated by an extensive collection of Specimens, and will begin on WEDNESDAY NEXT, 8th of October, at Nine o'clock A.M. They will be continued on each succeeding Wednesday.—October 4, 1851.

R. W. JEFF, D.D., Principal.

#### LIVERPOOL COLLEGE OF CHEMISTRY.

Professor—Dr. SHERIDAN MURPHY, F.R.S.E. STUDENTS are INSTRUCTED in EVERY BRANCH of the SCIENCE. Fees for Analysis or Assays may be had on application, with full prospectuses.

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#### BOROUGH OF GATESHEAD.—NOTICE TO ENGINEERS

AND SURVEYORS, AND TO COLLECTORS.—Any PERSON desirous of OBTAINING the APPOINTMENT to the office of SURVEYOR and INSPECTOR of NUISANCES to the CORPORATION of GATESHEAD, is requested to FORWARD TESTIMONIALS of QUALIFICATION and COMPETENCY, addressed (free of postage) to the Town Clerk, Town Hall, Gateshead, before Tuesday, the 21st day of October instant, on which day the Committee appointed by the Corporation will meet, at Nine o'clock in the morning, to receive and examine applications and testimonials of candidates.

As the duties of such Surveyor will comprise the Municipal as well as the Local Board of Health business of the Corporation, a candidate must be familiar with the practice of engineering, especially hydraulic engineering, in connection with works of water supply, drainage, sewerage, and surface cleansing, competent to conduct surveys, prepare plans, drawings, and estimates of works of every description, and able to superintend the execution thereof, test the materials, and see to the fulfilment of the conditions of the contracts for executing such works. The whole time of the Surveyor is to be devoted to the duties assigned to him, and he is to be restricted from undertaking any other employment.—Salary, £310 per annum.

Candidates are to state their age in their applications, but are not required to attend personally before the Committee, unless specially summoned, and no canvassing will be allowed. The successful candidate is required to give security for the faithful discharge of his duties by the bond of himself and two sureties in £500.

The said Committee will, on the same day, receive applications from persons desirous of filling the office of COLLECTOR of the DISTRICT and other RATES under the control of the said Corporation. He will be paid at the rate of three pence per pound on the amount collected. He must devote at least four days in each week to the duties of his office, and give security for faithfully discharging them, and duly accounting, by the bond of himself and two sureties in £1000.

The Town Clerk will, on application (if by letter, post-paid), answer all inquiries with respect to either office. By order, WILLIAM KELL, Town Clerk.  
Town Hall, Gateshead, October 1, 1851.

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This mine, the valuable nature of which has long been acknowledged by the most experienced mineralogists and mining agents, has been almost idle for some months past, but it has now passed into entirely fresh hands, who propose to work it vigorously, and bring to surface the rich ores which it is known to contain. For this purpose, the number of shares has been increased to 8448, and will now be issued to the public at £1 5s. per share. This will clear the mine of all liabilities, and leave a surplus of 5s. per share for working capital, which it is confidently believed will render further calls unnecessary, and be amply sufficient to bring the mine into a dividend-paying state.

It may be observed, that this undertaking is divested of much of the speculative character usually attached to mining adventures, inasmuch as several thousand pounds have been expended in sinking shafts, driving levels, erecting machinery, &c., and the existence and position of the lodes ascertained.

A limited number only of the shares will be disposed of; no allotments will be made, but transfers will be executed to unexceptionable parties, and certificates given on payment for the shares, application for which may be made to Mr. A. Elborough, at the offices of the company, 12, Old Jewry Chambers, City; or to James Lane, Esq., mining broker, 42, Threadneedle-street, where prospectuses and reports on the mine may be obtained, and specimens of the ores seen.

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Mr. SYLVESTER WALSH, Polygon, Somers Town  
Mr. JAMES ABRAGON, Malda-hill  
Mr. H. A. SPARDING, Hanover-square

(With power to add to their number.)

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BANKERS.—Messrs. Rogers, Olding, and Co., Clement's-lane, Lombard-street.  
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PUNSER AND SECRETARY.—Mr. Henry Palmer.

The Cwmdyle Rock and Green Lake Mine is situated on a large estate in the parish of Beddgelert, Carnarvonshire. The grant extends over about five miles in length and three in breadth, and is held under a lease of 21 years, 13 of which are unexpired, under a moderate royalty.

The purchase of the interest of the late adventurers in this valuable mine has been secured upon very favourable terms—viz., that the whole of the purchase-money shall be taken in paid-up shares in this Company, carrying interest of 6 per cent. per annum upon £2 per share—payable annually from their respective dates. The remaining £1 deposit and further call (if any), to carry dividends arising from the workings.

Interest, at the same rate, will be paid to subscribers upon all shares paid up in full by them. The bond fide holders of scrip in the former undertaking have consented to take in exchange paid-up shares in this Company, in preference to being paid off, and will be entitled to the same rate of interest thereon.

The greater part of the shares are already taken, and the remaining few have been allotted to responsible applicants, so that the Company may now be considered as fully established.

Applications for more detailed prospectuses and plans, may be made at the offices of the Company; also at the offices of the solicitor, 5 A, Milton-street, Dorset-square; and at Mr. Ringrose's, Sherrard-street, Golden-square.

#### GREAT WESTERN AND FOREST OF DEAN COAL COMPANY.—Capital £25,000, in shares of £1 each—paid-up.

Provisionally Registered, pursuant to 7 and 8 Vic., c. 110.

TEMPORARY OFFICE.—No. 3, BRIDGE-STREET, WESTMINSTER.

Prospectuses may be obtained of, and application for the remaining shares addressed to, the Secretary, at the offices, as above; or to the Solicitors to the Company, Messrs. Coombe and Nicoll; Messrs. Lind and Rickard, stockbrokers, 3, Bank Chambers, Lothbury; and of the following agents:—Bristol: Henry Dayrell, Esq., stockbroker, 6, Clarence-street.—Gloucester: G. P. Wilkes, Esq., solicitor.—Liverpool: Messrs. Love and Sons, stockbrokers.—Plymouth: J. B. Wilcocks, Esq., Barbican.—Windsor: Henry Davill, Esq., solicitor.

By order of the Directors, HENRY CAPPER, Secretary.

#### PROSPECTUS OF THE LEE MOOR PORCELAIN CLAY COMPANY.—(Provisionally Registered).—To be carried out on the principle of LIMITED LIABILITY.

Capital £100,000, in 4000 shares, of £25 each. Calls £2 10s. each, with an interval of two months between each call.

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CONSULTING ENGINEER.—Mr. William Hawley, Esq., 29, Great George-street, Westminster.

BANKERS.—The London and County



## THE MINING SHARE LIST.

| Shares. | Miner.   | Paid.   | Dividends per Share Declared. | Last Paid.        | Last Price. | Present Price.  |
|---------|--|---------|-------------------------------|-------------------|-------------|-----------------|
| 1130    | Alfred Consols (copper), Pilsall...                    | 3       | £ 1 19 to 1st Oct.            | £ 0 6 Oct.        | 14 1/2      | 14 1/2          |
| 1134    | Ally-Crib (silver-lead), Talbot, Wales...              | 11 1/2  | 0 2 6 to Aug.                 | 0 2 6             | 7           | 7               |
| 1134    | Bailswidden (tin), St. Just...                         | 11 1/2  | 0 15 to Aug.                  | 0 4 to Aug.       | 10          | 10              |
| 1134    | Bedford Down (copper), Tavistock Devon...              | 24      | 0 16 to Aug.                  | 0 4 to Aug.       | 7 1/2       | 7 1/2           |
| 1134    | Boswell United (tin), St. Just...                      | 24      | 750 0 to May, 1849            | 0 4 to Aug.       | 100         | 100             |
| 1134    | Botallack (tin and copper), St. Just...                | 182 1/2 | 440 0 to 5th April            | 5 0 to May        | 200         | 200             |
| 1134    | Bryntall, Llanidloes, Montgomeryshire...               | 24      | 0 5 to end June               | 0 5 to June       | 17          | 13 1/2          |
| 1134    | Callington (lead and copper), Callington, Devon...     | 29      | 6 0 to Sept., 1847            | 2 0 to Sept.      | 95          | 100             |
| 1134    | Carn Brea (copper and tin), Illogan, Cornwall...       | 15      | 305 0 to Sept., 1851          | 2 0 to Sept.      | 95          | 100             |
| 1134    | Comford (copper), Gwennap, Cornwall...                 | 70      | 11 0                          |                   | 20 1/2      | 105 110 107 1/2 |
| 1134    | Conduvor (copper and tin), Camborne, Cornwall...       | 20      |                               |                   | 110         | 110             |
| 1134    | Cornwall (lead), Cardiganshire...                      | 60      |                               |                   | 100         | 110             |
| 1134    | Deron Great Consols (copper), Tavistock...             | 252     | 214 10 to Sept.               | 5 0 to Sept.      | 252 1/2     | 275 280         |
| 1134    | Dolcoath (copper and tin), Camborne...                 | 252     | 214 10 to Sept.               | 5 0 to Sept.      | 252 1/2     | 275 280         |
| 1134    | East Pool (tin and copper), Pool, Illogan, Cornwall... | 24 1/2  | 233 0 to 1843                 |                   | 140         | 150             |
| 1134    | East Wheal Crofty (copper), Illogan, Cornwall...       | 125     | 242 10                        |                   | 150         | 150             |
| 1134    | East Wheal Rose (silver-lead), Newlyn...               | 50      | 2227 10 to 5th Sept.          | 12 10 to Sept.    | 450         | 450             |
| 1134    | Foway Consols (copper), Tywardreath...                 | 40      |                               |                   | 30          | 30              |
| 1134    | General Mining Company for Ireland (copper)...         | 14      | 35 per cent. to June          | 10 per cent. year | 3 1/2       | 3 1/2           |
| 1134    | Goginan (lead), Cardiganshire, Wales...                | 5       | 440 0                         |                   | 200         | 200             |
| 1134    | Great Consols (copper), Gwennap, Cornwall...           | 1000    | 353 8 to January              | 0 2 to Sept.      | 200         | 200             |
| 1134    | Great Polgoth (tin), St. Austell...                    | 3       | 0 2 to Sept.                  | 0 2 to Sept.      | 3           | 3               |
| 1134    | Great Work (tin), Gernoe...                            | 100     | 115 0 to Aug.                 | 5 0 to Aug.       | 200         | 200             |
| 1134    | Harodol (lead), near Liskeard, Cornwall...             | 100     | 85 14 to 1847                 | 0 2 to Aug.       | 5 1/2       | 5 1/2           |
| 1134    | Holmstun (lead and copper), Callington...              | 24      | 25 0 to Feb., 1844            | Feb., 1844        | 12          | 11 1/2          |
| 1134    | Kirkcubright (lead), Kirkcubright...                   | 9 1/2   | 0 5 to Sept.                  | 0 5 to Sept.      | 5           | 5               |
| 1134    | Kirkcubright (lead), Kirkcubright...                   | 9 1/2   | 0 5 to Sept.                  | 0 5 to Sept.      | 5           | 5               |
| 1134    | Lewis (tin and copper), St. Erth...                    | 17      | 2 0 to 1st Aug.               | 0 10 to Sept.     | 17 1/2      | 17 1/2          |
| 1134    | Levant (copper and tin), St. Just...                   | 24      | 1032 0 to 5th Sept.           | 2 0 to Sept.      | 150         | 150             |
| 1134    | Lisburne (lead), Cardiganshire, Wales...               | 75      | 640 0 to 1st Aug.             | 20 0 to Aug.      | 700         | 700             |
| 1134    | Low's Patent Copper Smelting Company...                | 9       | 1 0 6 to July                 | 0 4 to July 1     | 10          | 10              |
| 1134    | Mining Company of Ireland (copper, lead, and coal)...  | 7       | 7 10 6 to Feb., 1847          | 7 p.c. p. annum   | 4 1/2       | 5 1/2 5 1/2     |
| 1134    | North Pool (copper and tin), Pool...                   | 22 1/2  | 217 10 to 1st Sept.           | 7 10 to Sept.     | 210 1/2     | 210 1/2         |
| 1134    | North Wheal Basset (copper and tin)...                 | 10      | 225 0 to 5th April            | 6 0 to Sept.      | 180         | 180             |
| 1134    | North Wheal Basset (copper and tin)...                 | 10      | 225 0 to 5th April            | 6 0 to Sept.      | 180         | 180             |
| 1134    | Par Consols (copper), St. Blazey...                    | 55 1/2  | 374 0                         |                   | 650         | 12 1/2          |
| 1134    | Perran St. George (copper and tin)...                  | 21 1/2  | 1 15 to June                  | 0 10 to 4th June  | 40          | 40              |
| 1134    | Phoenix (copper and tin), Linkinghorne...              | 30      | 10 0 to March 5               | 5 0 to March      | 240         | 240             |
| 1134    | Providence Mines (tin) Uny Lelant...                   | 20 1/2  | 18 4 to Aug.                  | 0 15 to Aug.      | 20          | 25              |
| 1134    | South Caradon (copper), St. Cleer...                   | 2 1/2   | 255 0 to July                 | 2 10 to July      | 120         | 120 125         |
| 1134    | South Tregenna (copper), Redruth, Cornwall...          | 16      | 27 0 to 5th Aug.              | 3 0 to Aug.       | 150         | 150             |
| 1134    | South Wheal Frances (copper), Illogan...               | 80      | 101 15 to Sept.               | 6 0 to Sept.      | 200         | 180 200         |
| 1134    | Spearhead Consols (tin), St. Just, Cornwall...         | 1 1/2   | 859 0 to Aug.                 | 4 0 to Aug.       | 80          | 100             |
| 1134    | St. Ives Consols (tin), St. Ives...                    | 80      | 11 10                         |                   | 100         | 100             |
| 1134    | Stray Park and Camborne Vein (copper), Cornwall...     | 15      | 2 11 to July, 1849            |                   | 12 1/2      | 12 1/2          |
| 1134    | Tamar Consols (silver-lead), Beeralston...             | 4       | 5 17 6 to Sept.               | 1 0 to Sept.      | 7 1/2       | 6 1/2           |
| 1134    | Tincroft (copper and tin), near Pool...                | 7       | 27 15 to Sept.                | 1 0 to Sept.      | 15 1/2      | 15 1/2          |
| 1134    | Trehan (silver-lead), Menheniot...                     | 1 1/2   | 1 3 to Oct., 1847             | 0 5 Oct., 1847    | 3 1/2       | 3 1/2           |
| 1134    | Treleigh Consols (copper), Redruth...                  | 6       | 1680 15 to 1848               |                   | 300         | 300             |
| 1134    | Tresavean (copper), Gwennap, Cornwall...               | 30      | 409 10 to 5th April           | 6 10 to Oct.      | 207 1/2     | 220             |
| 1134    | Trevellick (copper), Gwennap, Cornwall...              | 130     | 246 5 to Oct.                 | 2 10 to Sept.     | 85          | 85              |
| 1134    | United Mines (copper), Gwennap...                      | 80      | 2 2 5 to Sept.                | 0 5 to Sept.      | 3           | 3 1/2           |
| 1134    | Wellington (copper & tin), Perranuthnoe...             | 20      | 162 15 to Sept.               | 2 10 to Sept.     | 97 1/2      | 97 1/2          |
| 1134    | West Caradon (copper), Liskeard, Cornwall...           | 20      | 245 0 to 3d Aug.              | 10 0 to 3d Aug.   | 380         | 385             |
| 1134    | West Providence (tin), St. Erth...                     | 10      | 5 0                           |                   | 7 1/2       | 6 1/2           |
| 1134    | Wheal Basset (copper), Illogan...                      | 10 1/2  | 109 0 to 1st Oct.             | 12 10 to Oct.     | 530         | 530             |
| 1134    | Wheal Brewer (copper), Gwennap, Cornwall...            | 2       | 2331 10 to Aug.               | 0 5 to Aug.       | 130         | 130             |
| 1134    | Wheal Buller (copper), Redruth...                      | 5       | 1 0 to July                   | 0 5 to July       | 30          | 30              |
| 1134    | Wheal Castle and Boswell (tin & copper)...             | 5       | 187 0 to Aug.                 | 2 0 to Aug.       | 150         | 150             |
| 1134    | Wheal Friendship (copper) Devon...                     | 130     | 21 5 to 21st Aug.             | 3 0 to Aug.       | 56 1/2      | 57 1/2          |
| 1134    | Wheal Golden Consols (silver-lead), Perranuthnoe...    | 3       | 27 10 to August               | 2 10 to Aug.      | 80          | 80              |
| 1134    | Wheal Loe (tin), Helston...                            | 40      | 194 10 to 5th Aug.            | 4 0 to Aug.       | 200         | 200             |
| 1134    | Wheal Margaret (tin), Uny Lelant...                    | 79      | 26 10                         |                   | 46          | 46              |
| 1134    | Wheal Mary Ann (lead), Menheniot...                    | 6 1/2   | 6 0 to Aug.                   | 0 10 to Aug.      | 26 1/2      | 26 1/2          |
| 1134    | Wheal Mary Ann (lead), Menheniot...                    | 6 1/2   | 313 per cent.                 | 15 p.c. end Aug.  | 26 1/2      | 27 1/2 27 1/2   |
| 1134    | Wheal Ovels, St. Just, Cornwall...                     | 200     |                               |                   |             |                 |
| 1134    | Wheal Reeth (tin), Uny Lelant...                       | 20 1/2  |                               |                   |             |                 |
| 1134    | Wheal Seaton (tin and copper), Camborne, Cornwall...   | 107     |                               |                   |             |                 |
| 1134    | Wheal Trelawny (silver-lead), Liskeard, Cornwall...    | 3 1/2   |                               |                   |             |                 |
| 1134    | Wheal Tromayne (tin and cop.), Gwennap, Cornwall...    | 9 1/2   |                               |                   |             |                 |
| 1134    | Wicklow (copper), Wicklow...                           | 5       |                               |                   |             |                 |

## FOREIGN MINES.

| Shares. | Miner.  | Paid.  | Last Price.           | Present Price.        | Shares. | Miner.                                     | Paid.  | Last Price. | Present Price. |
|---------|---|--------|-----------------------|-----------------------|---------|--|--------|-------------|----------------|
| 8000    | Alcan Mining Company (copper), Norway                 | 14 1/2 | 3 0 0 to Mar., 1848   |                       | 2       | 2  |        |             |                |
| 10000   | Brasilia Imperial (gold), Brazil                      | 24 1/2 | 8 17 6 to Dec., 1844  |                       | 21      | 21   |        |             |                |
| 12000   | Cobre Copper Company (copper), Cuba                   | 40     | 45 12 0 to June 1851  | 37 to June, 1850      | 35      | 35   |        |             | 34 1/2 35 1/2  |
| 10000   | Copiapó Mining Company (copper), Chile                | 14     | 6 10 to Oct., 1850    | 8 to Oct., 1850       | 6       | 6  |        |             | 6 1/2          |
| 10000   | General Mining Association (iron & coal), Nova Scotia | 20     | 6 10 to June, 1851    | 10 to June, 1851      | 12      | 12   |        |             |                |
| 2700    | Marmato (gold), Colombia                              | 24     | 2 0 0 to June, 1851   | 17 to June, 1851      | 7       | 7  |        |             |                |
| 5051    | Mexican Company (silver), Mexico                      | 59 1/2 | 0 8 6 end of 1846     | 44. In 1846           |         |  |        |             |                |
| 7000    | Royal Santiago (copper), Cuba                         | 10     | 33 4 0 to July, 1846  |                       | 2 1/2   | 2 1/2                                      |        |             |                |
| 11000   | St. John del Rey (gold), Brazil                       | 15     | 12 17 6 to Dec., 1850 | 17. 10s. to June 7    | 19      | 19   |        |             | 5 1/2 6        |
| 41714   | United Mexican (silver), Mexico                       | 28 1/2 | 1 12 6 to Feb., 1850  | 78. 6d. to Feb., 1850 | 2 1/2   | 2 1/2                                      |        |             | 2 1/2 2 1/2    |
| Shares. |   |        |                       |                       |         |  |        |             |                |
| 1024    | Appleford (silver-lead and cop.), St. Ives            | 3      | 1 1/2                 | 1 1/2                 | 1024    | Froild Llwydd Mines (lead)                 | 1 1/2  | 3 1/2       |                |
| 940     | Balmuccia Consols (tin), Uny Lelant                   | —      | 3                     | 3                     | 12000   | Gall'y y Llwyn (silver-lead), Merioneth    | 2      | 2           |                |
| 508     | Bell and Lanthorn (copper), Gwennap                   | 6      | 2                     | 2                     | 2560    | Garras (silver-lead), near Truro           | 5 1/2  | 2 1/2       |                |
| 256     | Borrow (copper), Liskeard                             | 2      | 1                     | 1                     | 1000    | Garreg (lead), Filat                       | 1      | 1           | 1              |
| 1800    | Bishopstone (silver-lead), Glamorganshire             | 2 1/2  | 10                    | 10                    | 1000    | Get-ri-vel (silver-lead), Cardiganshire    | 1      | 1           | 1              |
| 82      | Black Burn, Alston, Cumberland                        | 30     | 100                   |                       | 2500    | Georgia Consols (tin), St. Ives            | 2 1/2  | 12          |                |
| 5000    | Black Craig (lead), Kirkcubrightshire                 | 5      | 3                     | 3 1/2                 | 256     | Gonnemeth (copper), St. Cleer              | 47     | 12          |                |
| 8000    | Blackburn (iron), South Wales                         | 50     | 12                    |                       | 243     | Grambler and St. Aubyn (copper)            | 84     | 34          |                |
| 1024    | Bodmin Consols (lead), Wadebridge                     | 6      | 4                     | 4                     | 6500    | Great Bryn Consols (copper and tin)        | 1      | 2           | 2              |
| 5000    | Bodmin Moor Consols (tin and copper)                  | 1      | 3 1/2                 |                       | 2000    | Great Cowarch (silver-lead), Merioneth     | 2      | 2           |                |
| 1024    | Bodmin Wheal Mary (copper), Bodmin                    | 8      | 8                     | 6 7                   | 1024    | Great Sheba Consols (tin and copper)       | 8 1/2  | 3           | 3              |
| 6000    | Bolenowe  | 24     | 4                     |                       | 1024    | Great Wheal Alfred (copper), Phillack      | 7 1/2  | 3 1/2       | 6 1/2 7        |
| 120     | Bolowal and Naupen (tin), St. Just                    | 20     | 18                    |                       | 5120    | Great Wheal Badern (tin and silver-lead)   | 2      | 4           | 4              |
| 1024    | Boringdon Park (silver-lead), Plympton                | 1 1/2  | 3 1/2                 | 3 1/2 5               | 6000    | Great Wheal Martha (cop.), Stoke Clims     | 29     | 15          |                |
| 240     | Boscan (tin), St. Just                                | 15     | 9                     |                       | 512     | Great Wheal Rough Tor Consols (copper)     | 29     | 1           |                |
| 240     | Boscon (tin), St. Just                                | 1      | 1                     |                       | 1026    | Gustavus Moss (copper), Camborne           | 6 1/2  | 5           |                |
| 1024    | Bottle Hill (copper), Plympton                        | 1      | 1                     |                       | 812     | Hawke's Point (copper), Uny Lelant         | 8 1/2  | 3 1/2       |                |
| 1024    | British Iron, New, regis. (iron)                      | 12     | 8                     |                       | 6000    | Hilgaston Down Con. (copper), Calstock     | 24     | 3 1/2       | 3 1/2 3 1/2    |
| —       | — Ditto ditto, scrip                                  | 10     | 10                    |                       | 32      | Helvellyn Mining Company, Westmoreland     | 20     | 20          | 35             |
| 2000    | Bronfford (lead)                                      | 1 1/2  | 1 1/2                 |                       | 1500    | Hennock (silver-lead), Hennock             | 3      | 1 1/2       |                |
| 2400    | Bryn-Arian (lead), Cardiganshire                      | 24     | 12                    |                       | 10000   | Hibernian (copper) Ireland                 | 12 1/2 | 1           |                |
| 612     | Burton (lead), Menheniot                              | 3 1/2  | 8                     | 8 1/2                 | 2000    | Kenmare and West of Ireland (copper)       | 1      | 2           | 1 1/2          |
| 2000    | Bwch Consols (silver-lead), Cardiganshire             | 4      | 14                    |                       | 1900    | Keswick (lead), Portinscale, near Keswick  | 11     | 3           |                |
| 1000    | Cae-Gwyn (silver-lead), Cardiganshire                 | 1      | 4 1/2                 | 4 1/2                 | 1000    | Kilbricken (silver-lead), Clare, Ireland   | 3      | 3           | 3 1/2 4        |
| 4096    | Calstock United (copper)                              | 5      | 3 1/2                 | 3 1/2                 | 1024    | Kingszett and Bodfryn (lead and copper)    | 1      | 1           |                |
| 2000    | Cally (copper and lead), Kirkcubrightshire            | 1      | 1 1/2                 |                       | 1024    | La Min (Gwinnar), tin and copper           | 3 1/2  | 1           |                |
| 1000    | Camborne Consols (copper), Camborne                   | 7      | 7                     | 4                     | 1743    | Lamherose Wheal Maria (copper & tin)       | 13     | 7           | 6              |
| 10000   | Cameron's Steam Coal (coal), Swansea                  | 10     | 2                     |                       | 5000    | Lampoon Consols (copper), St. Neot         | 1      | 1           | 1              |
| 1168    | Caradon Great Cons. (cop.), Linkinghorne              | 7      | 2                     |                       | 252     | Lanarth Consols (copper), Gwennap          | 4      | 4           | 4              |
| 1536    | Caradon Vale (copper and lead), St. Ives              | 34     | 2                     |                       | 256     | Lelant Consols (tin), Uny Lelant           | 62     | 17          |                |
| 6000    | Caradon Wood (lead), Linkinghorne                     | —      | 2 1/2                 | 2                     | 13000   | Llwynnallies (lead), Cardiganshire         | 1      | 1 1/2       |                |
| 2000    | Carbana (tin and copper), Crowan                      | 5      | 4                     |                       | 1500    | Lydford Consols (lead)                     | 10     | 1 1/2       |                |
| 810     | Carn Galver (tin), Morvah and Zennor                  | 2 1/2  | 3 1/2                 |                       | 6000    | Marke Valley (copper), Caradon             | 10     | 2           |                |
| 5120    | Carn Valley, St. Dennis                               | 1      | 2                     | 4                     | 512     | Melin Llyn (silver-lead), Merionethshire   | 1      | 1           |                |
| 2000    | Carthow Consols (cop. & lead), Wadebridge             | 4 1/2  | 7                     | 6 1/2                 | 5000    | Menllyd Hill (lead), near Bristol          | 3 1/2  | 1 1/2       | 2 1/2          |
| 1056    | Carvannall (copper), Gwennap                          | 3 1/2  | 7                     |                       | 5000    | Merilyn (lead), Fins                       | 2 1/2  | 3           | 3 1/2 3 1/2    |
| 2000    | Cassandra Anne (lead & cop.), Stoke Clim.             | 5      | 5 1/2                 |                       | 1024    | Mill Pool (tin and copper), St. Hilary     | 2      | 2 1/2       |                |
| 2648    | Castle Dinas (tin), St. Columb                        | 4      | 1 1/2                 | 1 1/2                 | 256     | Mineral Court (tin), near St. Austell      | 25 1/2 | 13          |                |
| 2000    | Cefn Bruno (lead), Cardiganshire                      | 13     | 54                    |                       | 1024    | Modtontham & Marrabro (copper & lead)      | 3      | 2 1/2       |                |
| 2000    | Cefn Gwyn (silver-lead), Cardigan                     | 1      | 1                     | 1                     | 2000    | Molland                                    | 1      | 1 1/2       |                |
| 1024    | Chyphras (tin and copper), St. Endow                  | 3 1/2  | 3 1/2                 | 5 1/2                 | 160     | Morvah Consols (tin and copper)            | 2      | 3           |                |
| 1024    | Clyth and Wentworth (tin & cop.), Redruth             | 24     | 3                     | 4                     | 200     | Nansogollan (tin and copper), Camborne     | 7      | 7           |                |
| 1000    | Cockley Beck (copper)                                 | 1      | 2                     |                       | 340     | Nantes (lead), Cardiganshire               | 34     | 20          |                |
| 1000    | Cod Mawr Pool (lead), Llanrwst                        | 10     | 14                    |                       | 3000    | Nant-y-Car (copper), near Rhydar           | 2      | 7           | 5 1/2 7 1/2    |
| 2510    | Cook's Kitchen (copper and tin), Illogan              | 15 1/2 | 4 1/2                 | 4 1/2 5               | 5000    | New Copper Bottom (copper) Bridestow       | 1 1/2  | 1 1/2       |                |
| 1000    | Copper Bottom (copper), Crowan                        | 7      | 3 1/2                 | 3 1/2                 | 2948    | New East Crowndale (copper and tin)        | 1 1/2  | 1 1/2       |                |
| 900     | Court Grange (silver-lead), Cardiganshire             | 10     | 12                    |                       | 1024    | North Butler (copper), Redruth             | 5      | 17          | 18 1/2         |
| 211     | Cradock Moor (copper), St. Cleer                      | 30     | 8                     |                       | 2000    | North Downs (copper), Redruth              | 4      | 2           | 1 1/2 1 1/2    |
| 1600    | Craig-y-Mwyn (lead), Llanrhaadr, Mont.                | 84     | 10 1/2                |                       | 256     | North Fowey Consols                        | 3 1/2  | 12 1/2      | 8              |
| 256     | Crane and Bajawa (copper), Camborne                   | 20     | 32                    |                       | 2000    | North Levant (tin and copper), St. Just    | 1 1/2  | 2 1/2       |                |
| 1000    | Cwm Daren   | 2      | 3 1/2                 |                       | 2000    | North Tamar (silver-lead & copper) Devon   | 2      | 2           | 2              |
| 1000    | Cwm Erddin (lead), Cardiganshire                      | 6      | 4                     |                       | 256     | North Tolgus (copper), Redruth             | 11 1/2 | 5 1/2       |                |
| 2000    | Cwm Sebon (lead), Cardiganshire                       | —      | 1                     |                       | 1200    | North Treafan (tin and copper), Redruth    | 6      | 9 1/2       |                |
| 2000    | Cyffnodd Fawr (lead), Llanegryn                       | 10     | 10                    |                       | 1200    | North Wh. Butler, or St. South Tolgus      | 6      | 5 1/2       |                |
| 2000    | Dalrymple (copper and lead), Brecon                   | 1 1/2  | 10                    |                       | 262     | North Wheal Leisure, Ferranzabulo          | 1 1/2  | 1 1/2       |                |
| 1000    | Daren (silver-lead), Cardiganshire                    | 2      | 6                     | 4 1/2                 | 1024    | North Wh. Robert (copper), Walkhampton     | 3      | 1           | 1 1/2 1 1/2    |
| 7100    | Derwent (silver-lead), Durham                         | 10     | 2                     |                       | 1060    | North Wheal Trelawny (lead), Quethlock     | —      | —           |                |
| 5000    | Devon Consols North (cop.), Lamerton                  | 24     | 24                    | 1 1/2 2 1/2           | 2048    | Okel Tor (lead)                            | 2      | 2           | 2              |
| 4024    | Devon and Courtenay Consols (copper)                  | 24     | 12                    | 1                     | 512     | Old Brimpts (tin), Lydford, Ashburton      | 1 1/2  | 2 1/2       |                |
| 768     | Devon Great Tincroft, North Bovey                     | 4      | 4                     |                       | 256     | Old Wheal Basset (copper), Redruth         | 2      | 2           |                |
| 5120    | Dhurode (copper) Ireland                              | 2      | 8                     |                       | 1026    | Pendarvas Consols (copper), Camborne       | 3 1/2  | 4           | 4              |
| 672     | Ding-Dong (tin), Guilva                               | 1      | 7                     |                       | 1000    | Pendarvas and St. Aubyn (tin and copper)   | 5      | 4           | 5              |
| 2000    | Dolfrwynog (copper), Merioneth                        | 400    | 5                     |                       | 256     | Penhauger                                  | 3      | 2 1/2       |                |
| 2560    | Drake Walls (tin and copper), Calstock                | 6 1/2  | 5 1/2                 |                       | 4934    | Pennant and Craigwen (lead)                | 3      | 2 1/2       |                |
| 128     | Drift Moor (tin), Sancerre                            | 3      | 2                     |                       | 1000    | Penralt                                    | 1      | 1           | 3              |
| 1536    | Duke of Cornwall (copper), St. Winnow                 | 1      | 2                     |                       | 604     | Pentire Glaze (silver-lead), St. Minver    | 5 1/2  | 5           |                |
| 2000    | Dyfnwryn (lead)                                       | 10 1/2 | 5                     |                       | 700     | Pen-y-bank and Ergold (lead)               | 4      | 3 1/2       | 4              |
| 1024    | East Ballewidden (tin), Sancerre                      | 24     | 3                     |                       | 1024    | Penzance Consols (tin), Sancerre           | 2 1/2  | 1 1/2       | 1 1/2          |
| 256     | East Basset (copper) Redruth                          | 15     | 21                    | 19                    | 1000    | Peter Tavy and Mary Tavy (copper)          | 4      | 8 1/2       |                |
| 2500    | East Birch Tor (tin), near Ashburton                  | 3      | 3                     |                       | 2048    | Plymouth Wh. Yealand Con. (tin), Plym.     | 1 1/2  | 1 1/2       |                |
| 256     | East Boringdon Park, Plympton                         | 2      | 1 1/2                 | 1 1/2 1 1/2           | 1000    | Polberris (tin), St. Agnes                 | 15     | 13 1/2      |                |
| 1024    | East Buller (copper), near Redruth                    | 3 1/2  | 3 1/2                 |                       | 2000    | Polgare (copper), Penryn                   | 1 1/2  | 1 1/2       |                |
| 128     | East Carn Brea (copper), Redruth                      | 4      | 15                    |                       | 1024    | Prad Consols (tin), Towednack              | 3      | 17 1/2      |                |
| 1948    | East Crowndale (copper), Tavistock                    | 7 1/2  | 12                    |                       | 1024    | Prince Albert (tin), Ferranzabulo          | 1 1/2  | 1           |                |
| 200     | East Daren (lead), Cardiganshire                      | 13     | 30                    |                       | 2500    | Rhoswydol and Bacheiddin (lead)            | 10 1/2 | 6           |                |
| 256     | East Godolphin (copper), Crowan                       | 24     | 19                    |                       | 10000   | Rhymney Iron (iron), Rhymney               | 50     | 12          |                |
| 4000    | East Gannis Lake Junction (copper)                    | 2      | 1 1/2                 |                       | 10000   | Ditto New                                  | 7      | 3           |                |
| 512     | East Seta and Wheal Maude, Redruth                    | 5 1/2  | 5                     |                       | 1948    | Rix Hill (tin), Tavistock                  | 1      | 1           |                |
| 2000    | East Tamar Consols (all-lead), Beersfield             | 1 1/2  | 1 1/2                 |                       | 2000    | Rocks and Treverbyn (tin), St. Austell     | 4 1/2  | 4           |                |
| 256     | East Tolgus (copper), Redruth                         | 8      | 10                    | 8                     | 2048    | Runnaford Cornbin (tin)                    | 3      | 3 1/2       |                |
| 1000    | East Trevel   | 4      | 3 1/2                 |                       | 1024    | Sidney's Godolphin (copper), Breage        | 3 1/2  | 1 1/2       |                |
| 256     | East Wheal Frances (copper), Illogan                  | 8      | 4                     | 3                     | 10000   | Silver Valley & Wn. Brothers (silver-lead) | 1      | 1 1/2       | 1 1/2          |
| 2048    | East Wheal George (cop.), Walkhampton                 | 1      | 3 1/2                 | 3 1/2                 | 2948    | Snowdon (copper), Carnarvonshire           | 3      | 3           |                |
| 2048    | East Wheal Josiah (copper), Tavistock                 | 1 1/2  | 15                    |                       | 1024    | Sourton Consols                            | 2 1/2  | 3 1/2       |                |
| 512     | East Wheal Leisure (copper)                           | 12     | 15                    |                       | 2000    | South of Scotland                          | 1 1/2  | 1           |                |
| 1024    | East Wheal Margaret (tin and copper)                  | 1 1/2  | 4 1/2                 |                       | 2000    | South Carn Brea (copper), Illogan          | 10     | 4           |                |
| 2000    | East Wheal Rishleigh, Llanreath                       | 3 1/2  | 3 1/2                 |                       | 256     | South Friendship Wh. Ann (copper & tin)    | 30     | 28          |                |
| 1000    | East Wheal Reeth                                      | 1 1/2  | 1 1/2                 |                       | 1024    | South Plain Wood (copper), Ashburton       | 5      | 6           |                |
| 2000    | East Wheal Trelawny (copper), Tavistock               | 4      | 4 1/2 4 1/2           |                       | 2000    | South Speed (copper and tin), Uny Lelant   | 15     | 30          |                |
| 1280    | Esparir Lise Llanfihangel-y-Croethin                  | 4      | 4                     |                       | 1024    | South Tamar (silver-lead), Beersfield      | 1      | 2           | 2              |
| 1024    | Exmoor Eliza (copper), South Molton                   | 4 1/2  | 3                     |                       | 198     | South Trelawny (lead), near Liskeard       | 35 1/2 | 4           |                |
| 6000    | Ferret (copper and silver-lead), Devon                | 12     | 1                     |                       | 2000    | South Wales Minus Company (lead)           | 1 1/2  | 2           |                |